

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

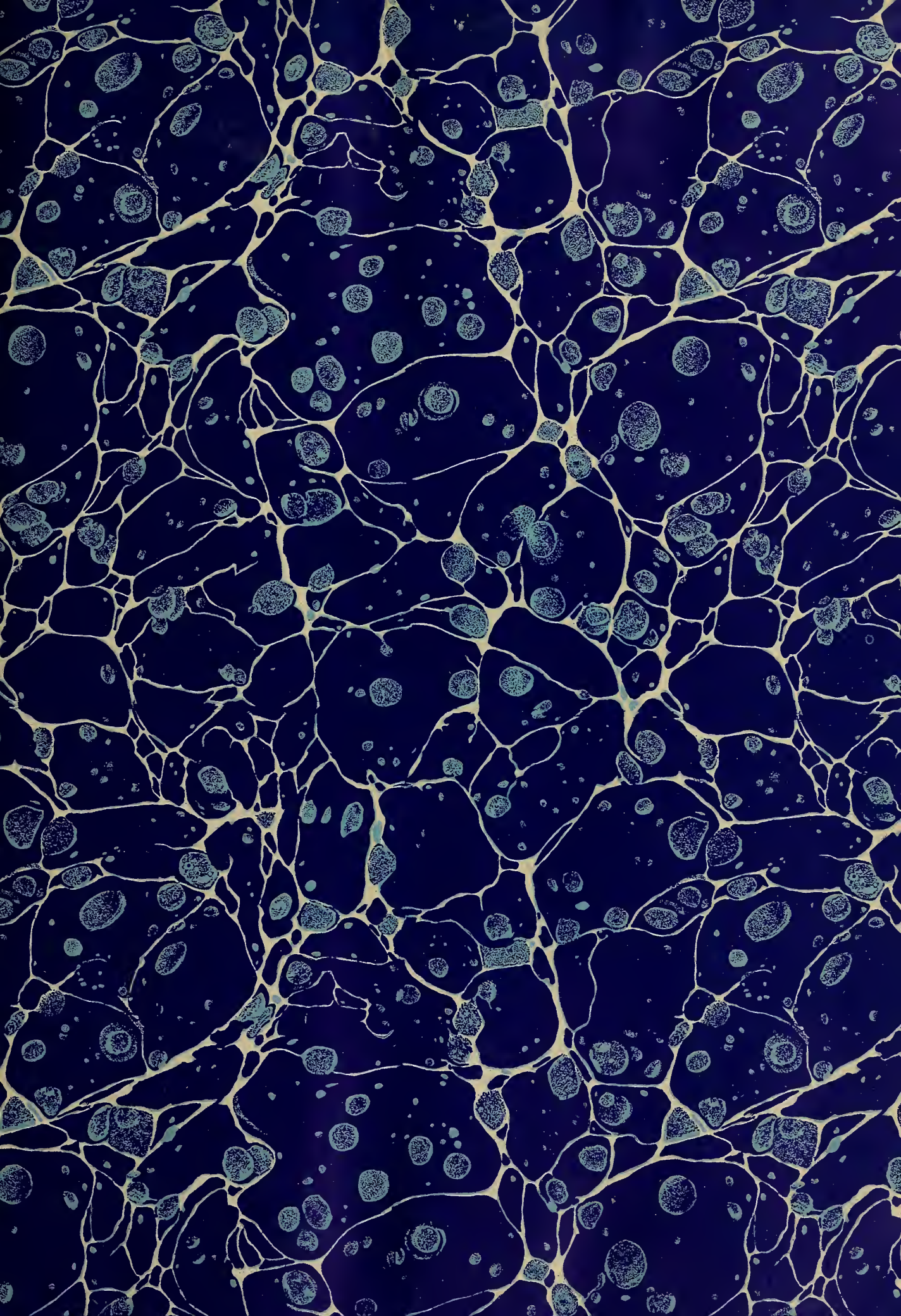
UNITED STATES
DEPARTMENT OF AGRICULTURE
LIBRARY



BOOK NUMBER 80
B46

7
July 1912-
June 1913

GPO 8-7671



October
26

LIBRARY

RECEIVED

JUL 10 1912

U.S. Department of Agriculture

BETTER FRUIT

VOLUME VII

JULY, 1912

NUMBER 1

FRUIT DEALERS' SPECIAL NUMBER

113294
agri
68



Copyrighted by
Hicks-Chatten Engraving Co., Portland, Oregon

BETTER FRUIT PUBLISHING COMPANY, PUBLISHERS, HOOD RIVER, OREGON

Subscription \$1.00 per Year in the United States; Canada and Foreign, Including Postage, \$1.50

Single Copy 10 Cents

This Light Weight Grader Will Solve Your Irrigation Problems

It is an all-steel one-man machine. It weighs only 600 pounds. It will stir your soil, level your land, cut laterals, pick up dirt and drop it where you want it, and cut ditches 24 to 36 inches deep at a cost of 2 cents a rod. It will do more work than big heavy graders in less time and with less effort. One man with two horses operates it. Ditches cut with the 20th Century Grader are "V" shaped, with firm, solid sides—no fear of their being washed down.

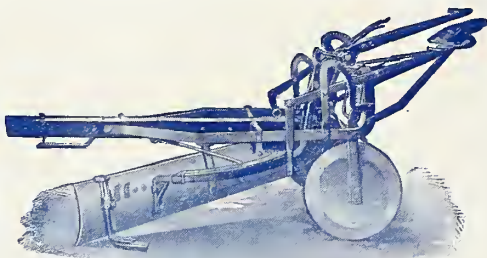
20th Century Grader

is a many purpose, easily operated machine that pays for itself over and over again and puts money into your pocket.

To get big results your work must be right, so you must have the right machine.

Let us tell you what others say about this wonderful machine. We want to prove to your satisfaction that it's a genuine money-maker. There are many uses to which the 20th Century Grader is specially adapted and many ways you can make big money by using it on your own land and on your neighbors'.

Write for our interesting and valuable free book giving full information about this money-making machine, what it has done for thousands and will do for you.



THE BAKER MANUFACTURING CO.

542 Hunter Building
CHICAGO, ILLINOIS

More American Centrifugals are used for Irrigation Pumping than any other

The reason is the American Centrifugal is the highest development of the most modern type of pump and it is made by pump designers of 43 years' experience, and not merely pump builders.

American Centrifugals are made in over fifty regular styles in any size and equipped with any power.

Catalogue 117, the most complete centrifugal pump catalogue ever issued describes them.

Write for it.

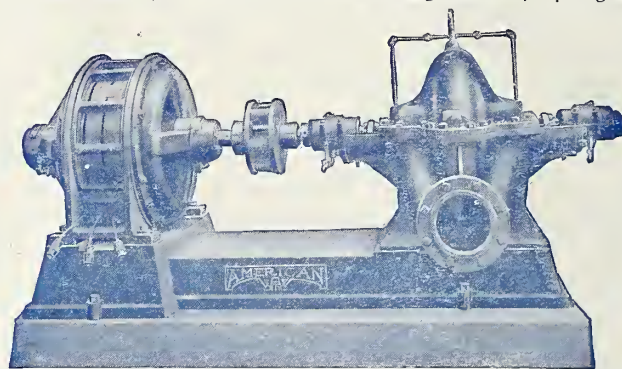


THE AMERICAN WELL WORKS

General Office and Works: Aurora, Illinois, U. S. A.
Chicago Office: First National Bank Building

PACIFIC COAST SALES AGENCIES:

70 Fremont Street, San Francisco 341 S. Los Angeles Street, Los Angeles



Holt Caterpillar

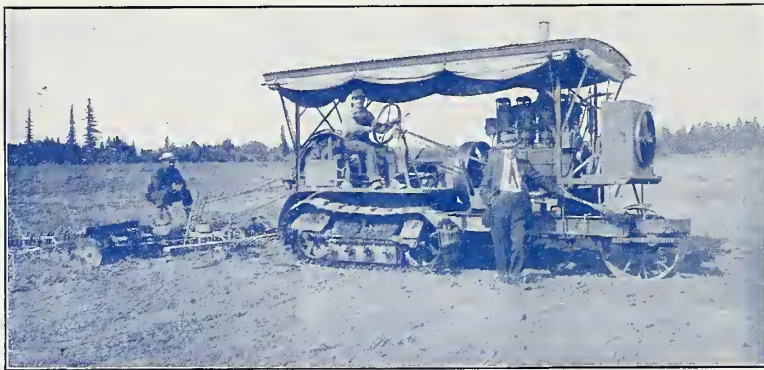
**GASOLINE
TRACTION
ENGINE**

This is the only Gasoline Traction Engine built that is genuinely different and notably better than any other. The CATERPILLAR TRACTIVE DEVICE is the only distinctive advance in construction since the gas tractor was first produced, and it places the CATERPILLAR in a class by itself.

This Track

Gives from 2,000 to 4,000 square inches of bearing surface, depending on the width of the track. The weight of engine is evenly distributed over this whole surface, giving it the lightest bearing per square inch and the most powerful tractive grip of any engine built.

**SATISFIED USERS AND
REPEAT ORDERS OUR BEST
ENDORSEMENT**



60 H. P. HOLT CATERPILLAR GAS TRACTOR

Which does the work of forty horses. Side view, showing Caterpillar track, spring mounting and power pulley.

The Caterpillar

Ready for work when work is ready.
Expense stops when work stops.
Will work rain or shine. Cannot pack the soil.
The Caterpillar has no wheel- to slip.
Runs on its own steel track.
Turns in its own length. Bridges depressions in ground.
Crosses irrigation ditches.
Fuel consumption small.
Handles like an automobile.
Economical in use and upkeep.

The Caterpillar

Can be used anywhere, on hard or soft ground. It can't be mired down and has no wheels to slip in wet land or loose and sandy soils. Practicable for plowing in early spring or late fall, whenever plows can be used, regardless of soil or weather conditions. Doesn't pack plowed ground and can be used for seeding, harrowing and harvesting. Crosses ditches, turns in its own length, flexible and easy to handle. Burns Distillate, which is 25 per cent cheaper than gasoline.

THE HOLT MANUFACTURING CO.

STOCKTON, CALIFORNIA, U. S. A.

J. W. HILL, Agent, 617 Lumbermens Building, Portland, Oregon

THE HOLT MFG. CO.

Portland, Oregon

Please mail me free Caterpillar literature.

Name

Address

BRANCH HOUSES

San Francisco, Cal.
Salt Lake City, Utah
Spokane, Wash.

Los Angeles, Cal.
Walla Walla, Wash.
Portland, Oregon



No-Rim-Cut Tires

10% Oversize

This is the tire which now outsells every other tire in existence.

The tire now used on some 200,000 cars, after more than one million have been tested out.

The tire that cuts tire bills in two.

We spent ten years in perfecting it. Then, at one bound, this patent tire jumped to the topmost place. All motor car owners should know this tire.

The Hookless Tire

Note that this tire has no hooks on the base. You don't hook it, like the old type, into the rim flanges.

Through the base of this tire run six flat bands of 126 braided wires. These make the tire base unstretchable.

The tire can't come off, whatever the pressure, because the base can't stretch one iota. But remove one of the flanges and it slips off like any quick-detachable tire.

Your removable rim flanges, with this new-type tire, are set to curve outward. Just slip them to the opposite sides. Then the tire when deflated rests on a rounded edge, and rim-cutting is made impossible.

This tire fits any standard rim.

Saves 23 Per Cent

The old-type tire, as shown in next column, must be hooked to the rim flanges. So these flanges are set to curve inward.

If the tire is wholly or partly deflated, these curved-in flanges dig into the tire. That is the cause of rim-cutting.



This type of tire may be wrecked in a moment if punctured and run flat.

Statistics show that 23 per cent of all ruined tires of this old type are rim-cut. No-Rim-Cut tires save this 23 per cent.

Also 25 Per Cent

We make these tires—No-Rim-Cut tires—10 per cent over the rated size. That is done to save the blow-outs due to overloading.

This 10 per cent oversize, with the average car, adds 25 per cent to the tire mileage.

These two features together—No-Rim-Cut and oversize—under average conditions cut tire bills in two.

Our Patent

The only way to make a practical tire of this modern type is controlled by the Goodyear patents. Other methods are not satisfactory.

So nearly all the demand for tires that can't rim-cut centers on Goodyear No-Rim-Cut tires.

And that demand is growing faster than we can build the tires. It is larger now than for any other tire.

You should investigate these tires. Ask men who use them. Saving half on tire upkeep means too much to miss.

Our 1912 Tire Book—based on 13 years of tire making—is filled with facts you should know. Ask us to mail it to you.

GOOD YEAR
AKRON, OHIO

No-Rim-Cut Tires

With or Without Non-Skid Treads

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

**Branches and Agencies in 103 Principal Cities. We Make All Kinds of Rubber Tires, Tire Accessories and Repair Outfits
More Service Stations Than Any Other Tire**

(654)

Established 1869

Incorporated 1908

SHIP YOUR APPLES, PEARS AND PRUNES TO

SGOBEL & DAY

235-238 WEST STREET

NEW YORK

Distributors to all Eastern Markets Exporters to their own Agents in Europe

A SQUARE HOUSE, TOP MARKET VALUE AND QUICK RETURNS

CORRESPONDENCE SOLICITED

IF YOU WANT TO MARKET
YOUR

FRUIT

RIGHT

ALWAYS SHIP TO

W. B. GLAFKE CO.
WHOLESALE FRUITS
AND PRODUCE108-110 Front Street
PORTLAND, OREGON

W. H. DRYER

W. W. BOLLAM

Dryer, Bollam & Co.

GENERAL
COMMISSION MERCHANTS

128 FRONT STREET

PHONES: MAIN 2348
A 2348

PORTLAND, OREGON

LEVY & SPIEGL

WHOLESALE

FRUITS AND PRODUCE

Commission Merchants

SOLICIT YOUR CONSIGNMENTS

Top Prices and Prompt Returns
PORTLAND, OREGON

Correspondence Solicited

Ryan & Virden Co.

BUTTE, MONTANA

Branch Houses:

Livingston, Bozeman, Billings
Montana
Pocatello, Idaho
Salt Lake City, Utah

Wholesale Fruit and Produce

WE HAVE MODERN COLD STORAGE FACILITIES
ESSENTIAL FOR HANDLING YOUR PRODUCTS
A strong house that gives reliable market
reports and prompt cash returns

The Old Reliable

BELL & CO.

Incorporated

WHOLESALE

FRUITS AND PRODUCE

112-114 Front Street
PORTLAND, OREGON

Richey & Gilbert Co.

H. M. GILBERT, President and Manager

Growers and Shippers of

YAKIMA VALLEY FRUITS
AND PRODUCESpecialties: Apples, Peaches,
Pears and Cantaloupes

TOPPENISH, WASHINGTON

W. F. LARAWAY

DOCTOR OF OPHTHALMOLOGY

EYES
TESTEDLENSES
GROUND

Over 30 Years' Experience

Telescopes, Field Glasses
Magnifiers to examine scaleHood River
Oregon

and

Glenwood
Iowa

Mark Levy & Co.

COMMISSION
MERCHANTS

Wholesale Fruits

121-123 FRONT AND
200 WASHINGTON ST.

PORTLAND, OREGON

T.O'MALLEY CO.

COMMISSION MERCHANTS

Wholesale Fruits and Produce

We make a specialty
in Fancy Apples, Pears and
Strawberries

130 Front Street, Portland, Oregon

IF YOU WANT TO KNOW ABOUT

OREGON

SUBSCRIBE FOR

THE CHAMBER OF COMMERCE BULLETIN

The largest commercial magazine in the

West

Devoted to upbuilding Oregon and
the Pacific Northwest

SUBSCRIBE NOW, \$1.50 PER YEAR

ADDRESS

THE CHAMBER OF COMMERCE BULLETIN

DAVID N. MOSESSEHN, Publisher

Suite 716 Chamber of Commerce Building
PORTLAND, OREGON



GOODSELL STRAWBERRIES
picked June 6th, 1912, in our own fields. The coin is a
silver dollar. Make your comparison of sizes.

NOW BOOKING ORDERS

FOR

Trees, Vines and
Bushes; also

Goodell Strawberry Plants

FOR FALL DELIVERY

A Few More Agents Wanted

*Liberal Commissions for persons
furnishing satisfactory references.*

The Sunnyside Nursery Co.

SUNNYSIDE, WASHINGTON

If You Want the Best Orchard Land in Oregon

I have what you want, whether it is five to forty acres for a HOME ORCHARD, or 400 acres for subdivision.

I have land in the Hood River Valley or in the Mount Hood Valley adjoining Dufur.

If you do not want to take possession at once, your land will be planted and cared for, in the best manner, for you for from three to five years, when it will come into bearing.

For further particulars address, P. O. BOX 86, HOOD RIVER, OREGON

ARCADIA IRRIGATED ORCHARDS

The Largest Irrigated Orchard Project in the Northwest

Arcadia is located twenty-two miles from Spokane. Our soil is rich and deep, entirely free from gravel, rock and alkali. Gravity irrigation, excellent transportation, ideal climate, no dust or sand storms.

OUR PLAN: We plant, cultivate, irrigate, spray, prune and care for the orchard for four years. Water free. Real estate taxes paid for five years. Over 4,000 acres is now planted to winter apples. You may remain at your present occupation while your orchard is brought to bearing, or, if desired, move onto the land at once.

TERMS: \$125.00 first payment secures five acres; \$250.00 first payment secures ten acres; balance monthly. Eight years in which to pay for your orchard. Write for literature.

EASTERN OFFICE
No. 1 West 34th Street, New York City

ARCADIA ORCHARDS COMPANY, Spokane, Washington

The Hood River Standard Nursery Co.

For Fall of 1912 and Spring of 1913

Leads in quality. Our trees are vigorous, well rooted and TRUE TO NAME. Our trees are free from disease and will pass inspection anywhere.

HOOD RIVER by its scientific apple growing has produced apples of such quality that they command the highest prices and are known in every market of the world. It has specialized on a few varieties and developed them to perfection. From this stock, THE MOST HIGHLY DEVELOPED IN THE WORLD, WE HAVE SELECTED OUR SCIONS AND BUDS.

THE WORLD'S FAMOUS

Spitzenberg and Yellow Newtown in large supply

**Also Winesap, Jonathan, Stayman Winesap, Rome Beauty, Gravenstein
Wagener, Northern Spy, Ortley and Arkansas Black**

A FULL LINE OF STOCK TO SELECT FROM

Special prices to Commercial Planters

Get our price list before placing your order

The Hood River Standard Nursery, Hood River, Oregon

COME ON IN! THE WATER IS FINE! FINE FOR WHAT?

Let the IRRIGATION JOURNAL Answer

It is the recognized publication of the land and irrigation industry, covering every phase of the great subjects of **irrigation, reclamation and development.**

The most elaborate, artistic and complete magazine of its kind published. Each issue contains special articles by recognized authorities, devoted to **irrigation, drainage, forestry, good roads** and kindred subjects.

The Journal, consisting of forty pages, with cover design in colors, is always beautifully illustrated. Its wonderful success is something unprecedented in the history of special publications, making it invaluable to the **farmer, fruit grower, engineer or investor.**

Published monthly—Price \$1.00 per year

National Land and Irrigation Journal

30 South Market Street

CHICAGO, ILLINOIS

A Great Offer for Our Readers on Special Easy Terms



A Text-Book to
the Student

A Manual to the
Gardener

A Library to the
Teacher

A Treasure to
the Botanist

A Guide to the
Amateur

A Companion to
the Country
Gentleman

L. H. Bailey's Remarkable Cyclopedia of American Horticulture

The Cyclopedia of American Horticulture presents the combined labor and experience of the 500 foremost American and Canadian authorities on horticultural subjects, which it has taken years of painstaking editorial work to put into its present convenient and attractive form. These four magnificent volumes place at the disposal of the horticulturist, whether practical, amateur or scientific, an ample and readily accessible account of every subject which at any time may be of interest or practical use in his calling.

EVERY LOCALITY TREATED

Its range is wide, covering plants, flowers, vegetables, trees, tillage processes, physiological chemistry, tools and implements, cultural discussions, botanical history, biographical sketches, horticultural geography and a myriad items that only constant use will reveal.

GREAT VALUE TO NURSERYMEN

The set is indispensable to all American libraries, not only because of its position as the foremost work of reference in its field, but by reason also of its great literary excellence and its scientific accuracy, as well as the wealth of cultural data and descriptions it contains. Nor has the scope of the volumes been confined to botanical subjects alone. Such captions as "Diseases of Plants," "Graftage," "Parks," "Perfumery Gardening," "Insects," "Nut Culture," "Railroad Gardening," "Transplanting," "Plant Breeding," "Storage," "Tillage," "Tools," all illustrate the fact that every subject in any way incident to the activities of the horticulturist has been fully covered, commercially as well as scientifically.

COMMERCIALLY PRACTICAL

It is therefore evident that the appeal of this work is very general. Its subject matter is of almost universal interest, and is treated in such a practical, scholarly and discriminating manner that whoever may be in any way concerned with horticulture, whether as a means of gaining a livelihood, as a mode of recreation, as an outlet for pent-up energy, as a field for scientific investigations, as a method of beautifying his surroundings, as gardener, seedsman, korist, student, teacher, botanist, merchant or country gentleman, will find in "The Cyclopedia of American Horticulture" a work replete with suggestions, abounding in ideas, and fertile in timely hints, philosophic in design, wide in scope and minute in detail—a counselor, guide and instructor ever within call.

Four large quarto volumes, 2,016 pages, 50 full page plates, 500 contributors, 2,800 original engravings, 4,400 articles, 24,400 plant names.

Our Offer

Better Fruit has always endeavored to supply its readers with the most authoritative and up-to-date matter on horticultural methods, and has therefore made arrangements with the publishers of the CYCLOPEDIA OF AMERICAN HORTICULTURE whereby they may obtain the work on special easy monthly terms. The complete set of four volumes, bound in cloth will be delivered to you for only \$2.00 down and \$2.00 a month for 9 months. Further particulars sent on request.

**SEND
ONLY \$2**

BETTER FRUIT PUBLISHING CO., Hood River, Oregon

Do You Know?

THAT NOW-A-DAYS

The automobile replaces the ox-cart

The flying machine the stage coach

The wireless the pony express

The graphophone the lady conversationalist

AND THAT THE

Capital City Nursery Company

Is up with the times, catering to the up-to-date demand
of the American people

No order is too small nor none too large
to be given proper attention

413-415 U. S. National Bank Building

SALEM, OREGON

A Reputation to Sustain

Vineland Nurseries Company

Clarkston, Washington

PROPAGATORS OF

Reliable Nursery Stock

All stock budded from bearing
trees, fruit and ornamental

CUT-OVER TIMBER LANDS

At low prices. Liberal terms for
small investors. Good soil, fine
climate, two railroads, excellent
markets.

20,000 Acres

Near Springdale, Stevens County,
Washington, are placed on the
market in tracts of 40 acres or
more. Ask for information and
booklet.

PHOENIX LUMBER CO.

348 Wall Street Spokane, Washington

THE OLD RELIABLE Albany Nurseries

Received highest award for display
of apple trees at the big California
Apple Show at Watsonville.

The above speaks for us.

For good grade of nursery stock
and right prices address:

The Albany Nurseries
(INCORPORATED)
ALBANY, OREGON

Salesmen wanted. Easy to sell
our trees.

SIMONS, SHUTTLEWORTH & CO., Liverpool and Manchester

SIMONS, JACOBS & CO., Glasgow

Garcia, Jacobs & Co., London

J. H. LUTTEN & SON, Hamburg

OMER DECUGIS ET FILS, Paris

EUROPEAN RECEIVERS OF AMERICAN FRUITS

FOR MARKET INFORMATION ADDRESS

Simons, Shuttleworth & French Co.
204 Franklin Street, New York

Walter Webling
46 Clinton St., Boston

John Brown
Brighton, Ont.

Ira B. Solomon
Canning, N. S.

C. W. King
Montreal, Que.

D. L. Dick
Portland, Me.

OUR SPECIALTIES ARE APPLES AND PEARS

John B. Cancelmo

127 DOCK STREET

PHILADELPHIA, PENNSYLVANIA

Car Lot Distributors Fancy Box Apples and Deciduous Fruits

The indications at the present time are for a large crop of apples, and it will therefore be necessary for distributors, buyers and shippers to make their storage arrangements early.

We are in a position to take care of a large volume of business this season and our cold storage facilities are unexcelled.

If you contemplate placing your apples in cold storage in the East, we would advise making early arrangements, as space will be contracted for at an early date.

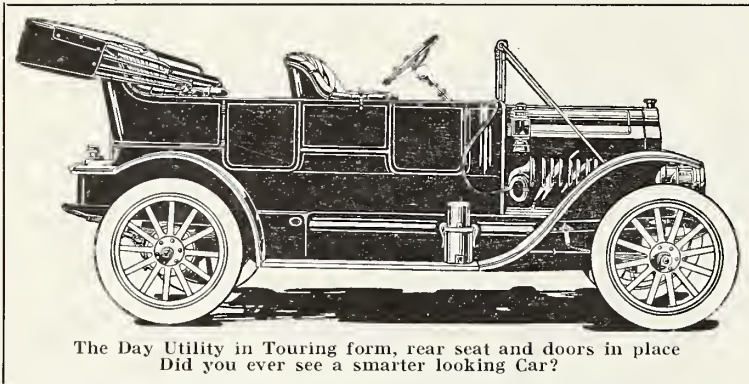
Write or wire us what you expect to ship, naming the varieties as well as the quality and quantity.

REPRESENTING

The Largest Fruit Shippers in California and the Northwest

Two Cars in One and Each A Perfect Car

The man who thinks he "can't afford to own an automobile" will have to revise his ideas. No man who is in business—whether it be the business of farming or fruit growing or merchandising, can afford **NOT** to own the Day Utility Car.



The Day Utility in Touring form, rear seat and doors in place
Did you ever see a smarter looking Car?

The Day Utility Car

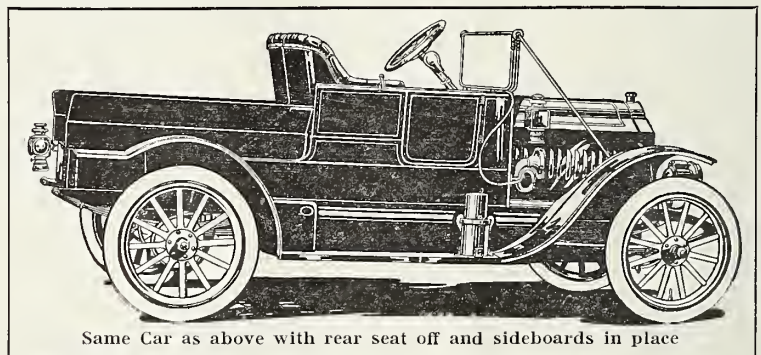
marks an era of economy and convenience in automobile building and automobile owning that places the motor car within reach of thousands who have heretofore considered it an expensive luxury.

The Day Utility Car is actually two perfect cars in one. It is a roomy five-passenger car, designed along strong, graceful lines—a car of beautiful proportions—and yet—you press a spring lock—the rear seat and doors come off—side boards are slipped in place—and in half a minute you have a clean cut, snappy delivery wagon with ample body room and a capacity of 1,000 pounds.

A Car for Farmers and Fruit Growers

Exactly the car that farmers, fruit growers, gardeners, as well as merchants, plumbers, contractors and others have been waiting for and wishing for these many years.

A car that will do the work of two or three horses—do it better and quicker, and one that is never too tired after the day's work is over to take the family out for a thirty or forty or fifty-mile spin in the evening.



Same Car as above with rear seat off and sideboards in place

The Day Utility Car is a Money-Maker instead of a Money-Spender—It Actually Saves its Cost in the Increased Efficiency and Decreased Cost of Delivery Work

The rear seat and door are instantly removable—no bolts or screws to take out—simply an eccentric lock that is instantly released, yet holds the seat firmly in position. The space under the front seat is all open, giving the delivery body extreme roominess. Side boards are provided that are instantly slipped in place and add still more to the capacity of the body.

The illustrations shown are from photographs and give an accurate idea of the car in its two forms.

Did you ever see a handsomer touring car—a roomier, smarter delivery wagon, and the price complete with quick detachable tires, gas and oil lamps, tools, etc., is only \$1,150.

Top and Windshield, if desired, are \$50 extra

Write for the Catalogue of this remarkable car

THE DAY AUTOMOBILE COMPANY
DETROIT, MICHIGAN

BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

The "Mistakes of Moses" and Many Others

W. B. Geroe, Toledo, Ohio, before National League of Commission Merchants' Convention, Indianapolis

MOSSES made his first mistake in being born so early in life. He could have done better later on. His second mistake was in not locating that bunch of bullrushes of Manhattan Island, now New York. It would have saved a long journey. It is a serious mistake for a produce man to believe that a whole lot of people in the same line are lying awake nights scheming to make him rich. It is no mistake to listen to your wife's advice on some occasions—and it's safer. It would have been no mistake if the appointment to the Interstate Commerce Board had been William S. Gavan of Maryland, and would have been a deserved compliment to the national league. It would be no mistake if the fruit papers confined their quarrels to an extra edition and circulated it only among themselves.

Minnesota seems to have been very long on Longfellow. One Longfellow started to make Minneapolis famous through song, another Longfellow keeps her famous through hospitality. There is no mistake about that—and not to be outdone in "gallantry," St. Paul comes over to visit St. Anthony, and the guns of old Fort Snelling, loaded to the muzzle with peace and prosperity, have kept the Eastern produce men from falling into the clutches of the "White Bear." To show you how strong a bond of friendship exists between the Twin Cities I will recite a fact. Some years ago Minneapolis had a fine old Irishman named McGovern on the city bench, who administered justice in a thoroughly St. Anthony way. One day a St. Paul truckman visited the city, and after fighting jack rabbit whisky (everybody but the stranger drinks beer in this town) he was picked up by the police. He appeared before the recorder the next morning. "Where do you live?" asked the judge. "St. Paul," said the truckman. "I thought as much, and shame on you, man," said McGovern, pounding his desk. "Why did you do it?" The truckman humbly said that he didn't know why he did it. "The only thing I know," said he, "is that I had sixty dollars and a clear head last night and now I have only twenty dollars and a head like a barrel." "I have a notion," said McGovern, "to send you to the works for a month. The very idea of your getting drunk in St. Paul and coming to Minneapolis to 'holler.' I am tired of the way you St. Paul drunkards behave." The truckman said mildly that he not gotten drunk in St. Paul. "It was all Minneapolis, that stew," said he, rubbing his aching head.

"All of it?" asked McGovern. "Did you spend the whole forty dollars in Minneapolis?" The man said he did. "Go in peace, young man," said McGovern. "It isn't often that I find such intelligence in a man from St. Paul." "I'll get out of Minneapolis as fast as I can," said the man. "Oh, don't hurry," said McGovern, "you still have twenty dollars left."

The national league made no mistake in accepting the invitation of the Sentinel City of this Northwest—Minneapolis—and her hospitable people. Moses was a law-giver. Had he lived along with Roosevelt the papers would

between heaven and earth. And lawyers grow rich on mistakes of their clients. The Hon. Samuel Tilden, was looked upon as the most learned lawyer in America. A lawyer who was paid fifty thousand dollars for drawing one mortgage left a will disposing of his great estate, drawn by himself, and this will was set aside on the first hearing, the court declaring that it did not know how the maker of the will wished to dispose of his property. Is it anything wonderful, in view of this, that a produce man sometimes comes very near making a blunder? Are all mistakes such? Are they errors of judgment? Does some subtle influence compel humans to serious mistakes, leaving no choice of paths, to will power or to intelligence? I believe that this does occur. I believe that in many instances the victim is a subject for pity and charity rather than censure. If it is a financial mistake he will get very little charity on this shore. If it is a moral mistake he will get none.

Mistakes of individual growers and packers—they make none, absolutely none. It's all the boy on the farm or the fellow at the other end of the line. Apple buyers—the same as foregoing. They come as near spiritual perfection as St. Peter's messengers. In September and October of every year an observer of ordinary intelligence and observation would imagine that every apple buyer was the owner of a mint located somewhere, and that he was trying to show Uncle Sam something new as to rapid circulation. Then for the next three months he wonders how he can manage to get most of it back. For genuine, downright wisdom the average apple buyer is a kindergarten student compared with Balaam's long-eared friend.

I have been in the business thirty-four years (God save the mark) and I know many and all of these mistakes mentioned. I want you to understand that I have been in the front ranks with bells on. Why not set our figures at what our judgment tells us is safe, sane and sober and let someone else carry the load and kick the blankets. Suppose that ninety per cent of all the apple dealers should go without fruit for one whole year. We could live through it; somebody would get enough of the apple traffic to give them financial colic for the balance of their natural lives. The world would move and so would we, and we might save up enough to buy an automobile, like white folks. The entire theory is a mistake. We allow two or three or a

Features of this Issue

THE MISTAKES OF MOSES

INSECT AND FUNGUS ENEMIES OF
FRUIT AND FOLIAGE OF
THE APPLE

REPORT OF STORAGE IN TRANSIT
COMMITTEE

PRESIDENT WAGNER'S APPLEWOOD
GAVEL

WESTERN BOXED APPLES DISPOSED
OF AT AUCTION

THE OLD WORLD'S GREATEST FRUIT
MARKET

COLD STORAGE AND THE APPLE
INDUSTRY

have no room for baseball news. That a royal lady found a little profit in "bull-rushes" is the first instance on record of a woman speculator. That Moses or his translators made some absurd mistakes cannot be denied. As I suppose every produce man is familiar with the "Pentateuch" (the first five books of the Bible) illustrations would be useless. That there was a Moses cannot be doubted—if only from the signs—along Broadway. But that Moses made these lessons in stone say what the interpreters have made them say is unbelievable.

Since the days of Moses some few other people have made mistakes—not only by hearsay but by history. That railways are right in classifications and rates is doubted—somewhat. That express companies are slowly killing the fowl that lays golden eggs will be a historical fact. Doctors, the law and lawyers make mistakes—and bad ones. Doctors' mistakes are usually buried memories. The laws' mistakes swing



Carl W. Kimball

Member of the firm of C. H. & C. W. Kimball, large handlers of fruit and vegetables in New York City, who was elected to the office of president of the National League of Commission Merchants at the Nineteenth Annual Convention, held at Minneapolis in January, 1911. Mr. Kimball advanced to this position from the vice presidency, which he held in 1910, and is taking an active interest in all league affairs.

half dozen buyers to set the pace and we follow in a bunch as though they were bell weathers, headed for the kingdom come and the devil take the hindmost. It is not recorded that Moses ever made a mistake in buying apples. Had he lived in New York it might have been different.

It is said that the surest way to make money with the pen is to raise hogs. I believe it. Brains are as common as people. It's an extraordinary set of double action imaginative that commands attention, financially, and then it's a set that can produce fiction rather than facts. Brains are like pearls in a clam. You find one clam in a million that has one worth talking about; same with human clams. The press covers a multitude of sins. The word embraces everything in circulation from an almanac to the most stupendous blanket sheet manufactured—and the press is financed and edited by human beings. They quarrel and clamor with contemporaries as do rivals in other lines of trade; but (with editors) they generally want the entire community at large to appreciate their sarcasm and wit, and you find it on the first page, in display head lines, or among the editorials.

It's a mistake to vent spleen and irony over the front fence. Go into the back yard and hammer your antagonist into a mental collapse. The less audience you have the less absurd you appear. News is news, same as pigs is pigs, and the buyer of news isn't out shopping for garbage or bloody reputations. The press of the produce trade is a great big public blackboard, set up in produce sections, and people who

read what is written thereon want facts, information, and as near the truth, on events and markets as can be obtained. The blacklegs should be head-liners, but occasionally some innocent fellow is flashed on the boards, and his only recourse is silence or a club, either of which attracts little public attention. We can't get along without you, but be as decent as you can. Your hearts are right, but your pens contract hydrophobia. Have 'em vaccinated often. And then the adds—the makeup of which, God knows, the press is not responsible, but they harvest all the blame. "We want potatoes, apples and cabbage for our fall trade"—that's stereotyped. You will find it in all produce mediums. So do a thousand other people want the above commodities "for their fall trade," and the grower is willing you should have it, at about what you can get out of it, with freight added, and on a bank guarantee. He makes no mistakes on that part of it.

That advertising pays, and pays big in many cases, is a fact beyond dispute, but it is a mistake to believe that all you have to do is to insert your ad and then sit down and reap a harvest. The cow never backs up to be milked. If she does she is a trained cow and is dry. A big circulation is a great thing, but the quality of the circulation is greater. It would be useless to advertise in Alaska for early potato shipments, or in Florida for winter apples—and you depend solely on the managers of the press to see that your ad reaches the target toward which it is aimed.

A beggar complained to the woman of the house that he had spent ten years in prison through fortune tellers, and that he had just got out and was compelled to ask for help. The woman was skeptical and asked him how for-



John W. Walker

Member of the firm of Humphrey Commission Company, Denver, Colorado, and who was president of the Western Fruit Jobbers' Association for the year 1911, and is now a member of its executive committee.

tune tellers could send a man to jail. "Well," he said, "the prosecuting attorney had told him where he had been and what he had done for three years of his life, and the judge had told him where he would spend the next ten." Now, if the fruit trade press would tell us where our ads will go for the first three months of this year and what we will get out of them during the next three months we will believe that a little fortune telling, backed up by a well written ad properly distributed, will pay—and the press will do it. If you don't believe it ask the several who are here.

Associations—do they make mistakes? If not they never do things. Shipping associations make lots of blunders. Why? Because their manager is just human, and when you find a human being that does not make mistakes he is paralyzed. The manager of every shipping association in the country wants to make a big showing. He wants to make a better average than his neighbor manager, and so he announces that he will sell everything f.o.b. shipping point; and he does just as long as some buyer pays him ten cents a package more than quotations from the very highest market could possibly net him—and he's posted on markets. If he ships but five cars in a season he has a bunch of red messages every morning that would choke an elephant, and so he sells as long as the representative buyer or the God-fearing broker, who is on the ground and has nothing else under the sun to do except to whittle, will buy at advance over possible net consign-



William D. Tidwell, Denver, Colorado
Secretary Western Fruit Jobbers' Association



Photo by J. E. Mock, Rochester
R. G. Phillips, Rochester, New York
Secretary of the International Apple Shippers' Association

ments. When he must consign it is the high mark that gets him—and it is also the same high mark that gets every other manager in the entire district—and they all ship, and the high mark goes out of business for several days until the clouds roll by. I never was manager of any association of growers, for which I thank God most profoundly. But if it was the chair or the managership, I would connect up with every other manager in my section of the country and establish a clearing house where somebody could parcel out the shipments intelligently and not load up to the guards one market that would have done right well with one-quarter of the quantity. You want a manager of managers, a bell cow, to direct the herd. And then the much abused commission man will take on more of a human form in the fanciful mind of the average association member than does the apparition with horns and a ring in his nose of haphazard shipping. If you doubt this ask Fleming of Georgia or Burton of old Virginia.

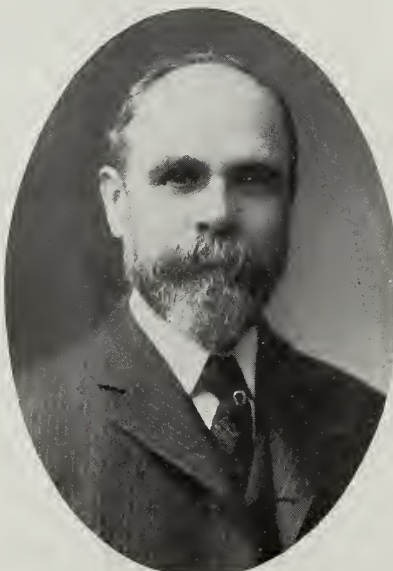
The Ladies.—Since Eve no woman ever made a mistake of any kind unless some man was mixed up in it. The most grievous mistake with many is the man they marry. If you doubt it ask her mother. Some women make mistakes by being too easy regarding their husbands' shortcomings, but the per cent of this kind is so small you would hardly notice it. Many are too severe with the man and cause him great anguish of mind trying to invent excuses. If you don't believe this ask his mother. There was once a man who had carved upon his contentious wife's tomb, "I am lonely now, but powerful peaceful." Another sinful man relates how, whenever he came home under the influence of boiled

corn, his wife invariably made it so hot that a century plant in the front hall blossomed every Saturday night, and this sinner told his friends how, through mental activity, he fooled her just once. He said, "I had sense enough to get off my shoes and most of my clothes down stairs, then I stole softly into the room and quietly slipped into bed, but she half awakened and I thought it was all up, but she only put out her hand and patted the bed and said, 'Is that you, Fido?' and I had presence of mind to lick her hand." It is a mistake for a girl to think that two can live just as cheaply as one, but it would never do to advertise the fact. After all the mistakes of women are so few, as compared with men's, that they are really virtues. If you do not believe this ask your wife.

Mistakes of Trade.—The "simon pure" produce man starts in as did the prophets of old—with hope, faith and but few shekels. He is usually young, full of ambition and life—possibly an embryo salesman with none of a proprietor's worries. All is gold that glitters. He renteth a small storehouse, in one window of which he maketh himself an office of small dimensions. It holdeth a desk, a small safe, a stove and the proprietor. In both summer and winter it is liken unto a bath known as Turkish, and the man sweateth himself and labors far into the night. He sendeth out circulars and letters liken unto the leaves of the forest, soliciting from the ruralite the things that he knoweth in his mind can be sold. He jumpeth for joy when he gets his first car of apples and he straightway opens a few and exclaims aloud when he beholds the face thereon. He hastens to the house of the banker and taketh up with much glee, and about all the money he has, the papers of ownership. With impatience he waiteth the coming of the first truckman and he openeth many

barrels so that all can see. He getteth a buyer, and the buyer opens to the light of day the other end, whereon is no mark, and low and behold his joy vanisheth, even as he computeth in his mind the profits on his car. He curseth the grower and the packer thereof, and the buyer laughs at him and sayeth unto him that he is as one without sense. But he learneth things as they come to pass, and he prospers among his neighbors, and he becomes endowed with shyness even unto the third and fourth generation. He ariseth before many people go to bed. He eateth sinkers and black coffee that he may save time. His family he seeth on the seventh day of the week, because he resteth from his labors nearly half a day upon the Sabbath. He ploddeth along and he meeteth the shyler Bill of Lading Party, and he knoweth, to his sorrow, of the guarantee known as bank. He dabbleth in apples and in the fruit of the hen, and he goeth down into the cellar so that his protestations may not be heard on high. He meeteth all the people who he hath never known before, when they cometh to his office seeking charity for the Lord and all of His people, and he is mortified to affiliate with the fine-dressed ladies who call upon him, owing to his garments, which are known among his kind as jumpers—and he giveth with a liberal hand much more than he can afford because of the awe with which the Grand Dames inspire within him—and upon their departure he kicketh the office cat into the street and swear-eth softly into the ear of his porter. At the ripe old age of four score and ten he is gathered to his fathers, and his neighbors rejoice that he has had so splendid a life and one so full and running over with rest and earthly pleasures; and the monument erected to mark his final resting place casts neither a long shadow nor a broad one. Here is the comedy and the tragedy

Secretaries International Apple Shippers' Association



A. Warren Patch, Boston, Massachusetts
Secretary 1896 to 1908



C. P. Rothwell, Martinsburg, West Virginia
Secretary 1908 to his death December 30, 1910



Fruit and Produce Section, Louisville, Kentucky

in the life of the average produce man. Is it a mistake? Has he labored along a trail that was as distasteful as unfamiliar to him? Did he run out the span of life and at the end realize that he had taken the wrong path at the start? The rich produce man gets his start toward that goal through the profits of his business, but he makes his money in real estate or in some venture outside the regular business. Not one well-to-do produce man in a thousand but will admit this. How many bankers would make good produce men? Not two per cent—and you can find a lot of produce men who would make good bankers. We have plenty of brains, but a lot of them are misdirected. There are several mistakes apparent. First, there are too many of us of one kind. We take too small a profit, gladly, and we stand too big a loss through necessity. Some of us should be manufacturers, others clothing merchants, hotel men, dry goods men. Some of us should go to the army or into the navy. Some of us should go to congress and some to jail. No mistake about that.

We need reform. We work too many hours. We take upon our own shoulders too much of the load. We fail to get lieutenants who can execute and think at the same time. We spend too little time with our families and in recreation, same as white folks. We do not push to the front our employes, when we do find a brainy one, as fast as we should. Thomas Edison said at a dinner in Chicago not long since that there was more ability, more inventive and more creative genius in every brain than was ever developed; that there was latent good in every individual, but that it took incentive to bring it out. The superintendent of a factory, in making his rounds, saw a young boy workman holding his hammer in the middle of the handle and hammering softly and without interest a piece of metal. He grabbed the hammer away and said to the boy, "Young

man, when I see a man take his hammer by the end of the handle and strike, bang, bang, bang, that means I pay him twenty dollars a week, and he is worth it, but when I find a man who takes it this way, by the middle, and goes tap, tap, tap, why I pay him nine dollars, and he is the first man laid off in dull times," and he handed the hammer back to the boy, convinced that his lesson had been absorbed; but the boy stepped back and said to him, "And now, please, sir, show me where to hold it at three dollars a week." You must give your men with whom you are surrounded some incentive in wage, or an interest in the business, that will bring out the best that is in them. You can't drive always. Life's too short to trifle it away trying to get rich.

Shorten up the hours. Get into the fresh air and God's country places. You hardly remember how blue the skies are in June. You only realize how long, how awful long, and hot and weary those golden days are. Think of it.

There will come a time when the days will be too short, even in June, and when the mistakes of a life must be reckoned with. To the older members of this national league, with deepest regard and affection, I dedicate this page. Before youth is entirely gone, before family is gone, friends gone and the gray sunset of a too active life warns that the day is done, have your cares unloaded upon younger shoulders. If you must die in the harness have a harness specially built—no check rein, no back band, no bit, no tugs, only a breast strap, velvet lined. The greatest mistake of life is life itself. The joy of living, the peaceful glow of the autumn evening, the quiet rest of the winter's night. It belongs to you and yours by right of heritage. It is yours by right of long years of toil. Take it. It is too late to continue a mistake or make new ones that can never be corrected.

"The moving finger writes,
And having writ, moves on;
Nor all your piety nor wit
Can lure it back to cancel half a line,
Nor all your tears wash out one word of it."

If your trees produce fancy fruit the boxes or barrels you ship it in and the cash receipts from its sale should bear every evidence of the fact. Do they? Schellenger Fruit Grading Machine Company.

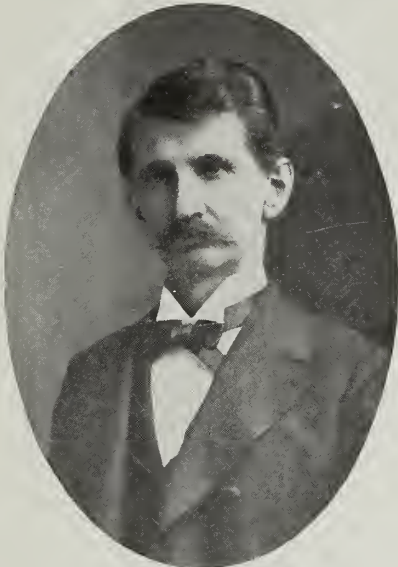
Editor Better Fruit:

Enclosed find order for three dollars in payment for five subscriptions to "Better Fruit." These make about fifty subscriptions sent you since October 1, and shows that Maine orchardists appreciate a fruit magazine edited by a practical man. Yours very truly, W. R. Palmer, Arono, Maine.



Exterior View of Erie Dock, New York, showing wagons of the fruit dealers ready to take away the fruit that has been bought at auction

Presidents International Apple Shippers' Association



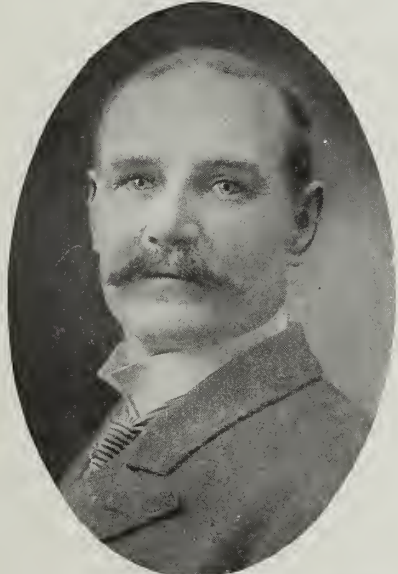
C. C. Bell, Boonville, Missouri
President 1895



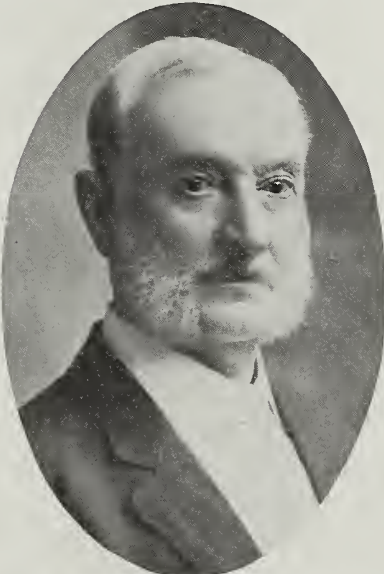
E. P. Loomis, New York, N. Y.
President 1896



C. H. Williamson, Quincy, Illinois
President 1897 to 1899



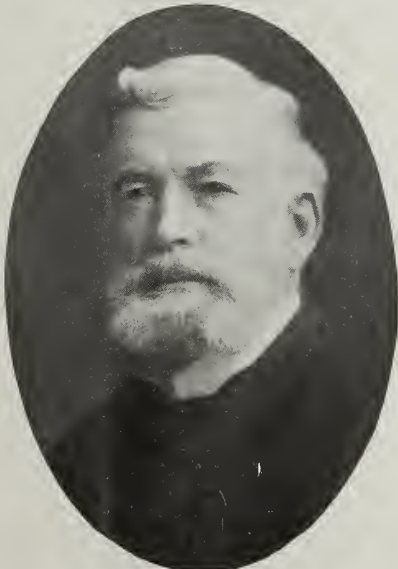
G. C. Richardson, Leavenworth, Kansas
President 1899 to 1901



Walter Snyder, Baltimore, Maryland
President 1901 to 1903



C. H. Weaver, Chicago, Illinois
President 1903 to 1905



D. O. Wiley, Detroit, Michigan
President 1905 to 1907



W. L. Wagner, Chicago, Illinois
President 1907 to 1911



Edward N. Loomis, New York, N. Y.
President 1911

Insect and Fungus Enemies of Fruit and Foliage of Apple

By A. L. Quaintance and W. M. Scott, United States Department of Agriculture

Continued from last issue

In sections where it is prevalent bitter rot is the most dreaded of all the common apple diseases. After the fruit has been safely nursed through the attacks of scab and the codling moth and is about ready to be harvested, an outbreak of bitter rot may destroy the entire crop of some varieties without much warning. It is rather spasmodic in its appearance, depending largely on weather conditions. Hot weather with plenty of moisture is essential to the rapid development of the disease, and it therefore does not occur to any serious extent in the more northern parts of the apple belt nor in the drier sections of the West. It is well distributed throughout the Southern States where apples are grown, extending into Southern Illinois, and has in the past destroyed several million dollars' worth of apples during a single season. However, in recent years, since its treatment has been better understood and more thoroughly put into practice, the annual losses have not been so great. The bitter rot disease appears on the fruit as a circular brown spot with concentric rings of fruiting postules. (See Figure 15.) The young spots are very small and often show purplish or reddish margins, but under favorable conditions they rapidly enlarge, involving the entire apple in decay. The disease extends inward toward the core at about the same rate as the spread on the surface, forming a cone-shaped area which can be easily crushed out with the fingers. Owing to the shrinking of the invaded tissues the spots become somewhat sunken, and this distinguishes it from black rot and brown rot. Several spots, or, in severe cases, several hundred spots, may occur on the same apple, although one spot is sufficient to destroy the whole fruit.

Bitter rot is caused by the fungus *Glomerella rufomaculans* (Berk.) Spauld. and Shrenk, which invades the tissues of the apple, producing the familiar spots described above. It passes the winter in cankers on the limbs and in mummied fruits. Under favorable weather conditions spores from these sources, and perhaps from unknown sources, infect the fruit, starting an outbreak of bitter rot. When the germ tube, resulting from the germination of a spore, finds its way through the skin of the apple it immediately begins to branch and grow rapidly, obtaining its food supply from the tissues and causing these to die and turn brown. After a time clusters or tufts of fruiting branches are formed, and these burst through the skin in rings, producing pink masses of spores which serve to spread the disease to other apples. Millions of spores are produced from a single spot, so that under favorable conditions the entire crop of an orchard may become diseased from one center of infection. In addition to the summer spores or

conidia there are produced on the mummied fruits and in limb cankers winter spores or ascospores, which constitute the perfect stage of the fungus. It is not definitely known that these ascospores play any important part in the life history of the fungus. Barring preventive measures, the two limiting factors determining bitter rot outbreaks are weather conditions and varietal resistance. Heat and moisture are essential to the vigorous growth of the fungus, and of these two heat is the more important. While hot, showery or muggy weather is ideal for the development of the fungus, serious outbreaks of the disease may occur during comparatively dry weather, provided the temperature is high and the dews are heavy at night. Infections may take place at any time during July, August and September, but rarely earlier or later. High summer temperatures are required for the rapid growth of the fungus, and these are the months in which such temperatures usually occur. Infections may begin to take place during the latter part of June if the weather conditions are right, but since the fungus does not thrive on young, green fruits no serious outbreak need be feared until July. Owing to climatic influence the bitter rot disease is confined mainly to the Southern tier of apple-growing states. The second limiting factor, namely, varietal resistance, varies in different sections of the country. For example, the Yellow Newtown in Virginia is very susceptible to the disease, and under favorable conditions the entire crop may be destroyed, while the Ben Davis in the same orchard will become only slightly, or not at all, affected. On the other hand, the Ben Davis, in portions of the Middle West—Southern Illinois, Southern Missouri and Northwestern Arkansas—is one of the most susceptible varieties. This would indicate that there are two strains of the fungus, the Ben Davis being susceptible to the one occurring in the West and resistant to the one occurring in Virginia. The most susceptible varieties grown in bitter-rot sections are Yellow Newtown, Willow, Huntsman, Smokehouse, Stark, Jonathan, Ben Davis and many other less prominent varieties.

Although it has been abundantly demonstrated that bitter rot can readily be controlled, even under the most severe conditions, many apple growers look upon it as the most treacherous of all the diseases with which they have to contend. The chief reason for this is the irregularity with which the disease appears. One year an outbreak may occur in July, while the next year the disease may not appear until September. Varieties partly resistant to the disease may go through several seasons without becoming affected, but when there comes a season unusually favorable to the fungus much of the fruit of these varieties may be destroyed

by the disease. This erratic habit of the disease keeps the apple grower in doubt as to when to expect it and when to spray. He does not care to give his orchard three or four bitter rot sprayings when there is no bitter rot to fight, and he is loath to begin the treatment in June if the disease does not occur until September, yet the only safe plan in bitter-rot districts is to expect the disease every year and to keep the fruit protected from the latter part of June until the end of September. Bordeaux mixture is still the best fungicide to use for bitter rot, the lime-sulphur solution having proved only partially effective against this disease. Fortunately bordeaux mixture has very little or no injurious effect on the apple after the young fruits have attained an age of six to eight weeks, and may therefore be used for bitter rot with comparative safety. As to strength, the mixture should be used as weak as is consistent with good results in order to avoid as much as possible leaving a stain on the ripe fruit. A mixture composed of three pounds of bluestone and four pounds of lime to each fifty gallons of water, if properly applied, is sufficient for ordinary bitter-rot treatment; but the very susceptible varieties in districts where the disease is common should be sprayed with a stronger mixture, composed of four pounds of bluestone and four pounds of lime to fifty gallons of water. In order to protect the fruit throughout the possible bitter-rot infection period the trees should be sprayed four times at intervals of two to three weeks, beginning seven to eight weeks after the petals have been shed. In the bitter-rot belt the dates of the application would be about as follows, though varying somewhat with the season: (1) June 25-30, (2) July 10-15, (3) July 25-31 and (4) August 10-15. Such a course of treatment, properly carried out, will secure protection against outbreaks of bitter rot under the most adverse conditions. By observing the weather conditions and watching for the first infections the first application may be delayed a few days and the intervals lengthened, so that three sprayings can be made to do the work. With very susceptible varieties this is risky, but with varieties only moderately susceptible three sprayings are sufficient. The removal of cankered limbs and the destruction of bitter-rot mummies doubtless help to control the disease and should be practiced, but these precautions cannot take the place of spraying. For the control of the second brood of the codling moth arsenate of lead, at the rate of two pounds to each fifty gallons of bordeaux mixture, should be used in the second and third bitter-rot sprayings.

Apple blotch may be considered the scab disease of the South, its effect on the fruit being very similar to that of apple scab. It is well distributed over



Figure 17—Foliage of York Imperial apple affected with cedar rust

the southern half of the apple belt, beginning approximately where apple scab leaves off, although there is considerable overlapping of the two diseases at some points. At present the disease is most destructive in Kansas, Oklahoma, Arkansas, Missouri, Kentucky and Southern Illinois. The destruction of half the crop of certain varieties is not an infrequent occurrence in some of these badly affected districts. The disease occurs on the fruit, twigs and leaves, but the principal damage is done to the fruit. Apple blotch appears on the fruit as a hard brown spot, with a roughened surface and a somewhat jagged margin. The blotch or spot is at first very small and light brown in color, but it gradually enlarges, finally attaining a size of one-fourth, or sometimes one-half, inch in diameter. (See Figure 16.) The advancing margin usually has a fringed appearance and the surface is dotted with minute, black, raised dots known as pycnidia. The spots may become so numerous as to practically cover one side of the apple, causing it to ripen and drop prematurely. They are usually accompanied by a cracking of the fruit, thus opening the way for other fungi and insects as well. Some of these cracks are very small, while others are half an inch or more in length. The appearance of affected fruit is so marred as to render it practically unfit for market. The fungus causing apple blotch attacks the twigs, fruit spurs and "watersprouts," producing small brown cankers with purplish margins. These cankers are usually only about one-fourth by one-

half inch in size, but may become considerably larger, and often girdle the affected twig. With age the bark over the diseased area becomes cracked and scales up, giving the canker a rough appearance. These cankers as a rule do no serious damage to the tree, but the fungus passes the winter in them, and they thus become a dangerous source of infection for the new fruit crop. The leaves also become affected, and here the disease manifests itself in the form of very small light brown or yellowish spots. These spots are angular in outline and attain a size of only about one-sixteenth of an inch in diameter. The spots are usually very numerous on leaves of trees affected with the twig cankers, but they are so small that the injury produced is not often serious.

Apple blotch is caused by the fungus *Phyllosticta solitaria* E. & E. The fungus lives over winter in the twig cankers, where it is perennial, and in the spring produces spores which ooze out in great numbers from little black raised points or pycnidia. These spores are carried to the fruit by rains, wind, and perhaps insects. Upon germination in the presence of moisture they throw out one or two fungous threads which penetrate the skin, become much branched and grow slowly in a radial manner, finally producing the brown blotches. On the young spots the fungus growing underneath produces small black receptacles in which spores are borne. These spores, when discharged, may infect other fruits, leaves and twigs. The fungus in the twig cankers becomes active about the time

the apple trees bloom, and about four weeks later fresh spores are produced, ready to infect the fruit and leaves. If the weather conditions are favorable infections, therefore, begin to take place from four to five weeks after the petals fall. Infections may continue to take place for several weeks, but as a rule the chief damage to the fruit crop results from the infections occurring within six weeks after the petals fall. Spraying for its control should, therefore, be done in time to protect the fruit from these early infections. The fungus is a slow grower and the spots may not show up until two or three weeks have elapsed after infections have taken place, so that to begin spraying when the first spots appear would be much too late to prevent the disease. Unfortunately the lime-sulphur sprays have not proved entirely satisfactory for the control of apple blotch. In orchards where the disease is not very serious lime-sulphur solution may be used with good results, but for the present at least the chief reliance for the prevention of the disease should be placed on bordeaux mixture. Lime-sulphur solution should be used with the first codling-moth spray as soon as the petals fall, thus avoiding a part of the danger of spray russet, and bordeaux mixture should be used in the subsequent applications. The spraying schedule for bad cases of apple blotch should be about as follows: (1) Lime-sulphur solution as soon as the petals fall; (2) bordeaux mixture three weeks later; (3) bordeaux mixture six weeks after the petals fall, and (4) bordeaux mixture nine weeks after the petals fall. In a dry season the third treatment may be omitted, and in mild cases lime-sulphur solution may be used in all the applications. For the control of the codling moth and curculio arsenate of lead should be added to the first, second and fourth treatments.

Cedar rust, also known as orange rust, is a disease affecting both fruit and foliage of the apple, quince and other pomaceous plants. It is common in practically all the apple-growing districts east of the Rocky Mountains, causing considerable damage to certain varieties of apples. In some sections the disease is troublesome nearly every year, but as a rule destructive outbreaks occur at rather wide intervals, depending upon weather and other conditions. Since the fungus causing the disease passes the winter on cedar trees and infection can take place only with spores from that source, the disease is confined to localities where the red cedar occurs. On the leaves the cedar rust disease manifests itself at first as minute, pale-yellow spots, which slowly enlarge, finally attaining one-eighth to one-fourth inch in diameter and becoming orange colored, with small black dots in the center. (See Figure 17.) Some time later, on the under side of the leaf beneath each spot, the tissues become swollen, forming a blister or cushion on which cup-shaped spore receptacles are produced. These cluster cups are small tubular projections



Figure 15—Apple affected with bitter rot



Figure 18—Cedar rust disease on the apple

with fringed margins. When only a small percentage of leaves is affected, as is frequently the case, no noticeable damage results, but susceptible varieties adjacent to cedar trees may become so badly affected that the trees appear yellowish, even from a distance. In such cases the function of the leaves is so interfered with that the fruit, the buds for the following year and the tree itself are not properly nourished. This results in small, immature, poorly colored fruit as well as weak buds and a weakened condition of the tree. Badly affected leaves usually drop prematurely. Cedar rust appears on the fruit of the apple as bright yellow spots about one-half inch in diameter, or sometimes larger. Both the black dots and the cluster cups occur on the spots, the latter usually forming one or more rings near the margin. (See Figure 18.) The spots may occur at any point on the fruit, but they are most frequently found near the blossom end. In severe cases the affected fruit may become deformed or atrophied, but as a rule there is no disfiguration other than the presence of the yellow spot. The market value of affected fruit is naturally reduced, much of it being discarded as culls. The disease on the fruit is not so important as that on the foliage, the greater damage being caused by the latter.

There are several different species of rust fungi which pass a part of their existence on the red cedar and are obliged to spend the remainder upon the apple or some other pomaceous plant. Perhaps the most common of these is the one known as *Gymnosporangium juniperi-virginianae* Schw. The spores produced in cluster cups which occur on the diseased leaves and fruit of the apple are carried by the wind to the red cedar trees, infecting the twigs of the latter and thus producing the well known "cedar apples." (See Figure 19.) These are reddish-brown, globular swellings, ranging in

size from one-fourth to one inch or more in diameter when mature. The fungus thus established on the cedar passes the winter and develops during the following summer, enlarging the gall, and finally during the second spring throws out long, yellowish, gelatinous projections in which spores are borne. These spores, while still in the gelatinous mass, germinate, producing a short fungus growth which bears a crop of smaller secondary spores. When the yellowish mass dries these secondary spores are carried like dust particles on the wind, and when lodged on the fruit or foliage of the apple germinate, giving rise to a fungous thread, which enters the tissues and finally produces the characteristic yellow or orange-colored spots. Later the cluster cups are formed on the under side of the leaf and on the fruit spots. In these cups are produced another kind of spore, which is carried back to the cedar trees, as previously indicated. This takes place during July, August and September. The spores produced on the apple cannot reinfect this plant, but must find their way to the cedar

or perish. Spores for the infection of the apple must come from the cedar. Plenty of moisture is required both for the production of spores on the cedar apples and for the germination of these spores on the leaves and fruit of the apple. It naturally follows, then, that a serious outbreak of the disease is likely to occur during a wet spring, while if dry weather prevails very few, if any, infections can take place. Beginning about the time apple trees are in bloom infections may take place over a period of three to six weeks, depending upon weather conditions. In warm, wet weather during this period the cedar apples throw out the yellow gelatinous masses in which the spores are produced. These may dry out and swell up again several times with alternate dry and wet weather, more spores being liberated each time. Such weather conditions prolong the infection period and result in a serious outbreak of the disease on the apple. Since the fungus causing the disease comes from the cedar trees and since the apple cannot become infected from any other source, the natural and most effective remedy is to destroy all red cedars in orchard districts. The cedars in fields or woods adjacent to the orchards are the most dangerous, but since the spores are like particles of dust they may be carried on the wind for several miles. However, upon being carried so far they would be scattered over a wide area, and the chances for serious infection of any one orchard would usually be slight, especially since moisture is necessary for the germination of the spores after they reach the apple. Orchards with no cedar trees within a mile may be considered fairly safe from infections. In cleaning up the cedars the underbrush, fence rows and hedges should be carefully searched for young cedars. Little cedar plants only a foot high often have cedar apples, and these are usually overlooked by the orchardist.



Figure 19—Cedar rust disease on the cedar (Cedar apple)

Spraying has not proved entirely satisfactory in the control of this disease, although much can be accomplished by this method. The usual treatment for scab and leaf-spot, namely, spraying (1) just before the blossoms open, (2) as soon as the petals fall and (3) three weeks later will largely prevent this disease during some seasons. In showery weather, however, an extra application should be made about ten days after the petals fall. The sulphur sprays appear to be somewhat more satisfactory for this disease than the copper sprays.

With the possible exception of cedar rust, leaf-spot, also known as frog-eye, is the most important fungous disease affecting the foliage of apple. It occurs in all sections east of the Rocky Mountains where the apple is grown, and in unsprayed orchards causes considerable damage by defoliating the trees. The spots are circular or somewhat irregular in outline and reddish-brown in color, becoming grayish with age. (See Figure 20.) At first they appear as minute purple specks, which rapidly enlarge until a diameter of from one-eighth to one-half inch is reached. The mature spots are usually circular, but after mid-summer may become irregular or lobed in outline, due apparently to a secondary extension of the disease from two or more points on the margin of the original spot. The leaf-spot disease begins to appear early in the spring soon after the first leaves unfold and infections may continue to take place until mid-summer or somewhat later. A large number of spots may occur on a single leaf, and in bad cases the trees may become defoliated six weeks or two months before the ripening time of the fruit. As a result of this premature defoliation the fruit either drops off or remains small and is of poor quality, the fruit buds are so weakened as to decrease the chances for a crop the following year and the trees are materially weakened. The black-rot fungus known as *Sphaeropsis malorum* Peck is the cause of apple leaf-spot, or at least it is the most common cause. Other fungi frequently occur on the diseased areas, but they are apparently secondary, and it has never been definitely proved that any of them are capable of producing the leaf-spot described above. The black-rot fungus is perhaps the most common fungus that occurs in pome fruit orchards. In addition to the apple leaf-spot, it is the cause of the black rot of apple, pear and quince, and produces cankers on the trunks and branches of these fruit trees. It also grows and fruits on twigs killed by pear blight and other parasites. Spores are produced in great abundance on these dead twigs, and it is from this source that the leaves most commonly become affected. The fungus fruits on the leaves hanging on the trees only sparingly, but after the diseased leaves drop to the ground spores are produced abundantly. Apple leaf-spot is controlled by spraying with lime-sulphur solution. The treatment for apple scab, as already outlined, will effectu-

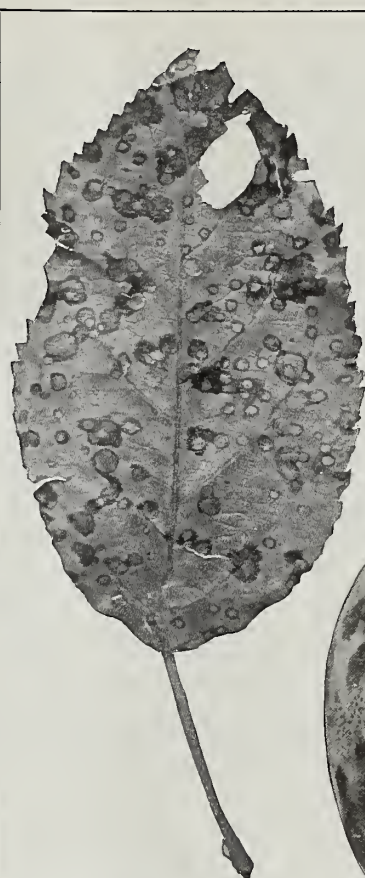


Figure 20—Apple leaf-spot on leaf of Ben Davis apple

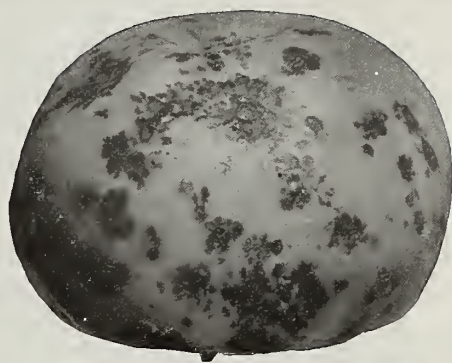


Figure 16—Maiden Blush apple affected with apple blotch



Figure 21—Sooty fungus and flyspeck on Huntsman apple

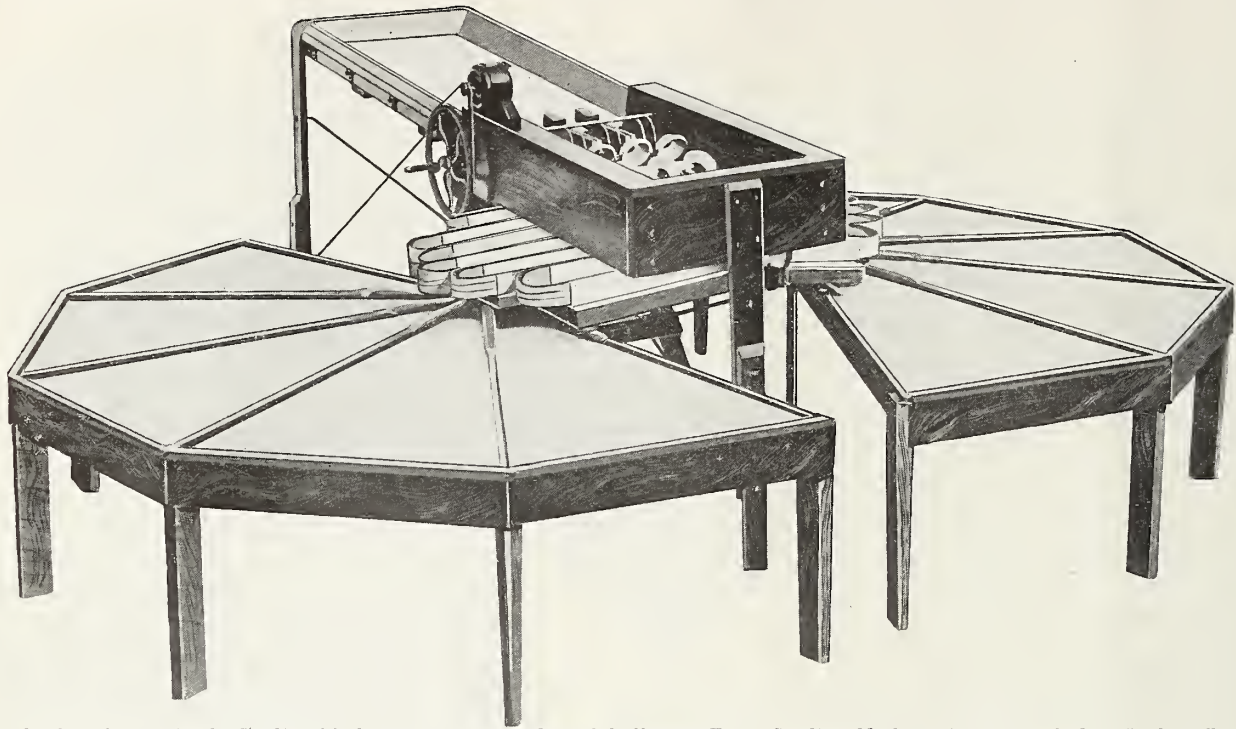
ally prevent this disease, no special treatment being necessary where the usual orchard spraying is practiced. During the process of pruning affected twigs should be cut off and burned, so as to eliminate this important source of infection.

Toward the end of the growing season apples may become affected with large sooty blotches, composed of dark olive-brown matted fungus threads. When numerous these blotches give the skin of the apple a clouded effect, and many fruitgrowers have learned to call the disease "cloud." The fungus is superficial, growing on the surface of the tissues. However, the sooty or clouded appearance which characterizes the disease injures the market value of the fruit, rendering it practically unsalable. (See Figure 21.) With the sooty spots are usually associated groups of small, circular, dark-colored flecks. This is a fungous trouble known under the common name of flyspeck. (See Figure 21.) It also mars the appearance of the fruit, but not to such an extent as the sooty spots. According to Duggar sooty blotch and flyspeck are stages of the same fungus, although for years they have been considered as two distinct fungi. The sooty fungus and flyspeck are common throughout the Eastern States, and in unsprayed orchards often

cause considerable damage. The fungus thrives best in moist, shaded places and is especially troublesome when cloudy, showery weather prevails during late summer or fall. The sooty fungus and flyspeck are more easily prevented than any other disease affecting the apple, as would naturally be expected from their superficial habit of growth. When treatment for bitter rot is practiced these troubles need no further consideration. Even the fungicide in the last spraying for apple scab will hold over long enough largely to prevent them unless the conditions during late summer are specially favorable, in which case an application of bordeaux mixture or lime-sulphur solution should be made in July. In low, damp situations an application during the first week in July and another during the first week in August, using a weak bordeaux mixture, will often be found desirable.

Preparation and Use of Sprays.—The several troubles herein considered are for the most part satisfactorily controlled by a thorough use of sprays. During the past few years there have been important improvements in the field of orchard spraying as regards the materials used and also in the character of machinery employed. At the present time orchardists, by careful attention to details, are able to obtain

Continued on page 53



The Schellenger Apple Grading Machine, manufactured by Schellenger Fruit Grading Machine Company, Ogden, Utah. The above picture shows the grading machine and packing tables as they are ready for work.

How Fancy Prices for Fruit Are Obtained

By N. C. Schellenger, Ogden, Utah

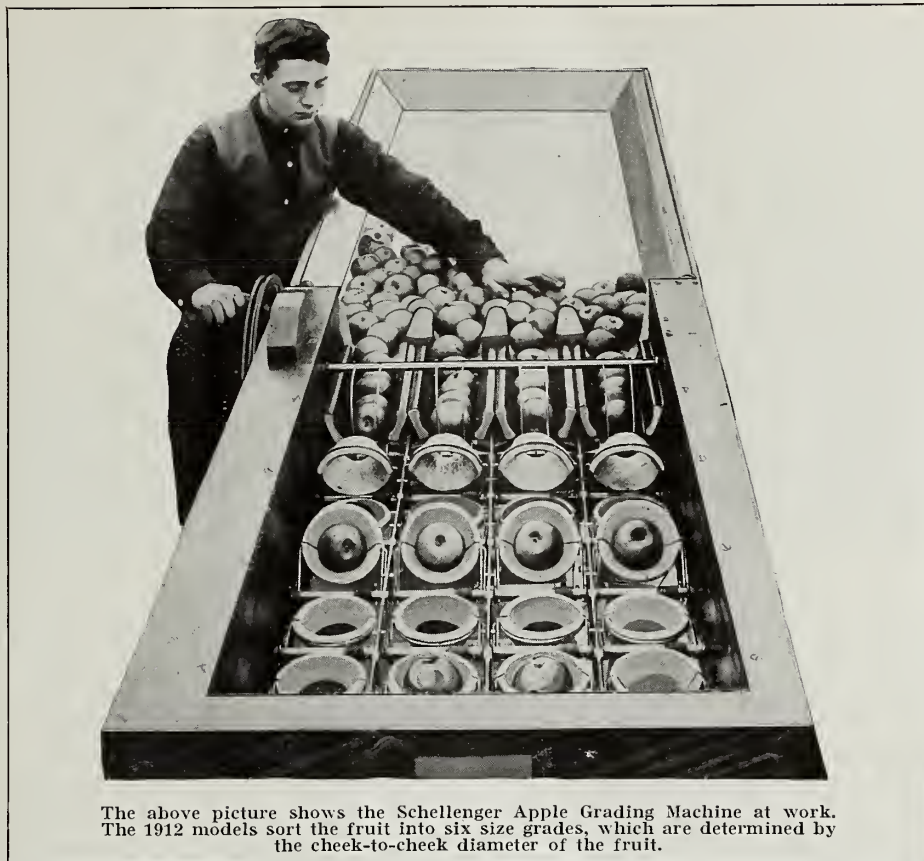
THERE is every assurance of a big crop of apples and peaches this year in practically every fruit growing district, and the marketing problem will be a proportionately difficult one for the grower to solve. There is no danger of an overproduction of fancy market apples, but as much cannot be said regarding the lower grades, which, of course, always bear the brunt of slow sales and low prices. The two questions confronting the grower, which will govern the amount of his profits or the extent of his loss on the season's crop, are: First, the marketing problem; second, the cost of production.

It is a losing proposition to raise good apples or peaches and then market them for low prices, but that is all that can be expected for fruit that lacks uniformity of grade. The fruitgrower's market lies with the masses who live in the centers of population. These city people are accustomed to modern business methods, and to get their custom one must recognize and be governed by the conditions. Fresh fruit is not a necessity of life, but on the contrary is a mild form of luxury to the city man and his family. Is it good business to try to market a luxury without making it appear at its very best and putting it in a form that will attract the attention of and tempt the purchaser? No, it is not. The modern merchant displays his goods in the most attractive manner he can devise and hires window dressers to arrange the window displays to attract the passer-by. His greatest profits are not made on the necessities of life, but on

the luxuries, and to sell them they must be made to look their best. He studies the demands of his trade, and by catering to it succeeds, where the merchant who does business the same as his grandfather did fails. City people are very observing; when they find an article that pleases them they look for the brand, and not only call for it thereafter but tell their friends of their discovery. They are the most liberal users of luxuries, but they will not pay a high price for a scrubby, unattractive looking article. If the fruit is attractive, looks delicious and then fulfills in use every expectation of the purchaser you have gained a new and permanent customer. This is creating the demand, and it is the advertising upon which the grower must depend. You are not raising fruit for one or two seasons only, but it is a life work, and to succeed like the merchant you must build up a trade for your brand, merit being its foundation. Growers who take pains to grade and pack their fruit right enjoy ready sales of their crop and good prices. They not only establish reputations for themselves but for their districts as well. In regard to the cost of production, no grower of commercial fruit can afford to let an item incident to producing it cost more than is absolutely necessary. The cost of labor to grade and pack the fruit by hand is a heavy expense. Added to this is the trouble experienced in getting sufficient and competent help. Nor is this all; there is the question of getting the force properly organized, so things go forward smoothly and with dispatch.

The demands upon the grower are so many and pressing he finds it impossible to meet them all and properly supervise the work. The result is his crop is not packed out as it should be, or as he would have it. The question then arises, how can the small grower, as well as the large, meet the demands of the modern market? The answer is, by employing improved and modern methods.

As a solution to your problems we invite your attention to the Schellenger Fruit Grading Machine, manufactured in Ogden, Utah. This machine is the pioneer apple and peach grader. It was first placed upon the market just prior to the 1911 packing season, and it immediately found a demand not only in excess of the company's estimate but in excess of the factory's capacity. Every machine, both the peach grader and the apple grader, gave entire satisfaction in the various fruit districts from the Pacific Northwest to as far east as the New England States. Following are some of the features of the 1912 machines: They are built in sizes and designs to meet every requirement from that of the small grower to those of the large packing house. Even the largest machine can readily be run by hand, and all are arranged to be operated by power when so desired. They are not expensive, nor are they complicated or hard to operate; anyone can handle them successfully. Each machine is equipped with a full set of ten adjustable pitch packing tables, so designed as to facilitate the highest degree of team work among the packers. No special arrangements in the way of buildings are necessary to accommodate the grader; it can be used in the orchard when so desired. The



The above picture shows the Schellenger Apple Grading Machine at work. The 1912 models sort the fruit into six size grades, which are determined by the cheek-to-cheek diameter of the fruit.

largest machine does not cover a space fourteen by fifteen feet. All 1912 models sort the fruit into six size grades, and these grades are determined by the cheek-to-cheek diameter of the fruit. There is no hit or miss about the grading; it is done with mechanical accuracy, absolutely without bruising. The system of grading employed does away completely with seventy-five per cent of the handling required by hand grading, and the facilities for color and blemish sorting reduces the work fully thirty per cent over that of the best other methods. After the fruit has been accurately graded, according to its cheek-to-cheek diameter, into six size grades a new beginner can put up the famous "tier pack" with a few hours' practice. Not only that, he can average twice as many packed boxes

per day as the expert packer using the old method, whose claim to high wages lies solely in his ability to determine by his eye the exact size and classification of each apple. The opportunity provided for the inspection of the graded fruit is perfect; there is treble assurance against a blemished or off-colored apple getting into a pack. This machine not only places fancy prices within the reach of every grower but it solves the expensive and perplexing labor problem, and permits him to prepare his fruit for market in less than half the time required by the old method. The accompanying cuts give a general idea of the machine, together with its method of operation. Detailed information regarding the various models can be had by addressing a request for same to the company.

Northwestern Exposition In Minneapolis, 1912

Seven states have again combined to hold a great exposition to show the products of their soil, mines, lakes, rivers, forests and factories after the harvests are over and the state and county fairs have made the collection of the finest products in the world available. The Northwest Products Exposition, as it will be called, will be held in Minneapolis, November 12 to 23. The seven states which will participate are Minnesota, North and South Dakota, Montana, Idaho, Washington and Oregon. To make this exposition possible the business men of Minneapolis will erect a building of solid steel, brick and concrete, with a great exposition floor 250x125—as large as Madison Square Garden, New York

City. At a cost of \$10,000, the Civic and Commerce Association of Minneapolis and the St. Paul Association of Commerce have bought space from the Northwest Development League for the seven states, where their official exhibits will be installed.

The Northwest Products Exposition will be almost twice as large in extent as the "land show" held in St. Paul, and it is the hope of officers of the Northwest Development League that it will be a better exposition in every way, as they have almost ten full months to prepare for it, whereas they had but a little more than three months to organize the St. Paul show. "The products exposition can only be likened to a miniature world's fair," said

President Penwell in speaking of the outlook. "The Northwest States have learned the exhibit business and have learned that it is necessary to advertise in a very graphic way to attract settlers who would otherwise go to Canada or the Southwest." Will A. Campbell, secretary of the league and manager of the exposition, is leaving for the West and will spend much time in the field, but will also open an office in Minneapolis March 1.—Exchange.

Foreign Grown Potatoes

Large quantities of foreign-grown potatoes are being received in this country. Their fine appearance and reasonable cheapness, in comparison with home grown, is a strong temptation for many of our farmers to use them for seed. Don't do it. In testing more than one hundred varieties our national department has proven that they do not equal home-grown seed as producers. The great danger, however, is in introducing several new diseases as yet unknown here. The most dreaded is the "wart disease." Bulletin No. 52 of the Bureau of Plant Industry and Farmers' Bulletin 489 of the Department of Agriculture, Washington, fully describe the same. Spongospora scab, black leg and leaf curl are others. The danger from these diseases is not limited to a single season, as soils once infected remain unfit for potato culture for many years. Foreign-grown potatoes under no circumstances should be used for seed for seed potatoes. Such potatoes are not adapted to our soils and climate and will not return profitable yields. Several serious diseases not now prevalent in this country are almost certain to be introduced if such stock is used for seed.—E. H. Healey, Secretary Connecticut State Board of Agriculture.

Receiver's Sale

The partially completed project of the Okanogan Irrigation and Improvement Company, located in the best fruit growing district of Washington, is to be sold under sealed bids at Spokane August 7, 1912. More than 16,000 acres of land to be watered. Five miles of main canal already dug. Plenty of water and good place for storage. Land under contract for an equal division of land with company when water is on. Full particulars of Thomas H. Jones, Receiver, 317 Rookery Building, Spokane, Washington.

Editor Better Fruit:

I could not get along without your valuable "Better Fruit." Yours respectfully, J. H. Cummings, Sutherlin, Oregon.

CHEEK-TO-CHEEK GRADING



EVENTUALLY YOU WILL WANT OUR ADDRESS
SCHELLENGER FRUIT GRADING MACHINE CO.
OGDEN, UTAH.



Fruit Sheds of Hamburg, Germany

Report of Storage in Transit Committee

President Edward N. Loomis of International Apple Shippers' Association, at the Detroit Meeting

THE storage in transit privilege is the privilege of stopping any car of freight in transit at any warehouse for the purpose of storage, or of performing some work in connection with said freight, and at some later time to ship it to any market and to pay for the entire service the through rate from the initial point of shipment to the ultimate destination plus a switching charge for the extra service rendered in connection with the stop-over. This charge in transit privilege has already been granted by all transcontinental lines on grain, lumber and coal. The object of your committee has been to obtain from the transcontinental lines the same privilege on carloads of box apples. The privilege is absolutely essential to permit an intelligent distribution of the crop of box apples. It will benefit in great measure not only the growers and merchants but also in equal degree the railroads and the warehouse men. The crop of box apples is grown almost exclusively west of the Mississippi in the States of Oregon, Colorado, Washington, Idaho, California, and to a less degree in other Far Western States. It has steadily increased in quantity until last year it amounted to 20,000,000 boxes, equaling 24,000 cars. The crop is shipped within one month and a half. It requires nine to ten months to place this crop in consumption. At the present time a freight rate of one dollar a hundred apples, whether any car of apples is shipped to Denver, to Chicago, to New York or any other cities on the Atlantic sea coast. At the time the crop is harvested it is impossible to know which market will be over-supplied with box apples or under-supplied, and as a result merchants have been inclined to ship the quantity of box apples of which they have charge to their immediate home market. As a result last year the markets of Chicago and New York received a supply larger than all their ware-

houses could take care of, and the surplus was stored at points adjacent to those two markets, with the intention later to ship to those markets. There was a penalty in shipping the apples stored at these two centers to cities of the second and third class, because an extra freight had to be paid between the place of storage and the smaller market. That extra freight rate had the tendency to force the selling and lower the price at the large markets. Under a proper scheme of distribution the crop of box apples should be distributed throughout the country proportionately to the wealth of the country. Based on this proposition half the crop, namely, 10,000,000 boxes, should be sold in the territory between Chicago and the Atlantic sea coast. Under the present traffic arrangements about one-fifth of the crop is sold in that territory, and that is distributed almost entirely between Chicago, New York and Philadelphia, with a small amount marketed at Boston.

With the storage in transit privilege in force, therefore, all transcontinental lines would double their traffic in box apples, and the lines east of Chicago would particularly increase their traffic. The merchants could ship their supply of box apples to any warehouse, either near or distant from their home market, with the knowledge that if at some future time markets nearer the Atlantic Coast are more favorable they could forward them to such markets without the payment of additional freight. Under such a system not only would each market receive the utmost that it could consume at the highest possible price, but in addition the buyers at any center, such as Chicago, could never calculate upon the necessity of the apples stored in their vicinity being sold there regardless of price, but would always run the danger, if they did not buy at favorable opportunities, of having the apples shipped

to some market further east, with the result of diminishing the supply and raising the price at their own market. The grower would reap the benefit of the increased price gained from a more intelligent distribution, and a more active and profitable business in box apples would be the result to both grower and merchant. In addition the cold storage warehouses, especially between Chicago and New York, many of which now find it difficult to make both ends meet in any season's business, would be raised at once into a condition of prosperity. Their entire capacity would always be in demand; they would no longer have to induce the grower in the vicinity of their warehouses to store their apples with them. They could maintain full storage rates, a condition they have not seen for several years, and incidentally they would no longer have to yield to the temptation of exaggerating values to the grower in order to induce him not to sell to the apple merchant, but to store his fruit in their warehouse and obtain the benefits of a rising market.

Your committee has been at work in obtaining this much desired privilege for two years, and can today only report progress. Under the able leadership of Mr. N. G. Gibson, who was chairman during the first year, this matter had been brought to the general attention of the trade and to many railroads, and at the last convention a resolution was passed authorizing the transportation committee to prosecute this matter with energy, and if necessary to present their petition before the Interstate Commerce Commission to obtain the same privilege on apples as existed on other commodities. Funds were voted to defray their expenses, subject to the approval of the executive committee.

Shortly after the adjournment of the last convention your president appointed as a sub-committee to the



Fruit and Produce Public Market, Indianapolis, Indiana

transportation committee a storage in transit committee, and in the middle of December last he called a meeting not only of our storage in transit committee, but also in conjunction similar committees from the National League and from the Western Fruit Jobbers' Association. At that meeting a conference committee was formed, representing those three fruit associations, which should have charge of the entire matter, so that all the efforts of all these three organizations would be made in unison. At that meeting the following resolution was offered by Mr. Wagner and duly adopted: "Resolved, that owing to the growing necessity for storage in transit of box apples from the West, to the end that a broader and more equitable distribution may be accomplished, thus fostering and protecting the industry, increasing the traffic and aiding the furnishing of equipment to move the crop, the appended rules governing such storage in transit of apples be submitted to the Transcontinental Lines Freight Bureau and individual lines interested, with a request that said rules be adopted in effect, and such storage in transit privilege be made lawfully applicable in time to properly move the apple crop of 1911."

Inasmuch as the Interstate Commerce Commission during the preceding year had issued an order to the various railroad systems to properly police all storage in transit privileges so that no substitution of freight could be made under cover of the same, or other evils be permitted contrary to the filed tariff schedules of each railroad, the conference committee drew up rules to properly protect the railroads in granting the privilege from any abuse, discrimination or substitution. The rules are as follows: "Apples.—Carloads, from any point shown in tariff, may be shipped to any intermediate point, placed in storage and afterward re-consigned on protection of through rate, under the following provisions: 'A.' The storage point must be an intermediate point in the same general direction, between point of origin and

for back haul will be made when ultimate destination is in the same general direction, or storage point is in territory intermediate via any route from point of origin to final destination. 'B.' Storage must be in a warehouse furnished by shipper or owner of property. The carrier not to assume charges for storage, insurance or other expense accruing at warehouse. 'C.' Shipments entitled to storage in transit privilege shall have their expense bills at the storage station stamped 'To be stored in transit.' 'D.' The surrender of paid expense bills, accompanied by warehouse receipts, certified, identifying said shipment will be a declaration by the shipper that said shipment is entitled to transit privileges. 'E.' Shipments may be stored in transit for a period not exceeding nine months, but in no case is the privilege to be extended beyond July 1 following. 'F.' Upon surrender of paid in-bound expense bills shipments will be rebilled from storage point to final destination at balance of through rate, if any, from initial point of shipment to final destination, plus a switching charge not to exceed five dollars. 'G.' The through rate in effect on date of shipment from point of origin shall be the rate to be protected."

The above resolution and rules were ordered printed and the task was given to Mr. Schifferle, traffic manager for N. G. Gibson, to mail a copy of same to each traffic manager of every transcontinental line entering Chicago. Mr. Tidwell, of the Western Fruit Jobbers' Association, was given the same task in regard to all lines west of the Missouri River and I was to perform the same work with the railroads entering New York. We soon learned in carrying on this work that our efforts must be confined largely to the two great traffic associations, viz., the Transcontinental Freight Bureau at Chicago and the Trunk Line Association at New York, which associations determine freight rates on all transcontinental traffic, and the rules and privileges applying to same. Mr. Wagner and Mr. Schifferle have been untiring in their efforts to secure a hearing before the Transcon-

tinental Freight Bureau and have written innumerable letters to all the Western lines, presenting the arguments in favor of the privilege and asking for a hearing before said bureau. I have here many letters in response to Mr. Wagner's letters, all of them assuring us of that hearing and many of them stating that they would warmly support the granting of such privileges. The transcontinental bureau was constantly delayed in holding their meeting until the decision of the Interstate Commerce Commission on the long and short haul question could be decided. That matter is now fortunately out of the way. The transcontinental bureau commenced its session on August 7, and the conference committee of all the associations will be granted a hearing between now and the first of September. At that time the arguments will be presented by Mr. Wagner and various other members of the conference committee, with the hope of a favorable decision in this matter.

Mr. Tidwell, secretary of the Western Fruit Jobbers' Association, has rendered valuable aid in working for the storage in transit privilege. He has already secured that privilege for the territory west of the Missouri River. His thorough knowledge of railroad business and his energy and perseverance in discussing this matter with officials of all railroads interested has been of great assistance in bringing the matter to their attention and in obtaining favorable consideration of this privilege. We know that he will be very influential in obtaining the storage in transit privilege from the Transcontinental Freight Bureau. At New York Mr. French, secretary of the National League, has considered this matter one of the most important of his year's work. He is an old traffic manager, has grasped the problem thoroughly in all its details and has been very influential in working the question up to an earnest consideration by all railroads. He and I had several important meetings with the officials of the New York Central. The head officials of that line stated to us on many occasions that they were earnestly in favor of this privilege, that they believed it would increase the traffic in box apples on all lines entering New York, and particularly on their line, which has so many cold storage houses, but while their words were cordial their acts were dilatory, and the same lack of progress was apparent in this matter as has kept for years the New York Central traffic department far in the rear of the Erie and Pennsylvania railroads.

The New York Central officials realize, however, that up to date they have received almost nothing of the valuable traffic of box apples. They realize that that traffic means four hundred dollars on every car carried; that their proportion of that rate from Chicago is one hundred dollars a car, and they know that the merchants controlling the movement of this box traffic will not grant them any considerable part thereof unless they grant the storage in

transit privilege. They have hesitated thus far in taking definite action and have suggested that the initial lines, viz., the Harriman lines, could and should put this privilege in force by reason of the beneficial effect to the growers along their lines. Under their suggestion, Mr. French and I took a trip to Washington to meet Messrs. Stubbs and Luce, the traffic managers of the Harriman lines. We presented our arguments before them, and they have since written asking for statistics showing the relative selling prices of box apples in various years according to the size of the crop and their comparison with the prices obtained in those years for barrel apples. We have furnished them with that information, which showed that box apples last year sold at very nearly the same price per bushel as barrel apples, whereas under proper distribution a much larger price would be obtained per bushel for box apples than for barrel apples.

The Erie railroad has up to date declined to grant the privilege and has been a large factor in the Trunk Line Association of New York in preventing favorable action in this matter. They already have a considerable part in this traffic and already grant the storage in transit privilege on all apples stored in warehouses on their lines without charge. They can do this by reason of the fact that all the principal cold storage warehouses on their lines are situated in Jersey City within lighterage limits, and under the supposition that such apples are stored for export they are allowed to be reloaded into cars and transported either to steamer or to the railroad terminals on the New York side of the harbor without additional charge. Or in case the apples are carted from those warehouses to the merchants' stores in New York City, a rebate of three cents a hundred is paid to the owners; thus it comes about that a carload of box apples may be transported to Denver, Chicago, or Buffalo, or New York City at not less than one dollar a hundred, but may be trans-



View of Dock Street, Philadelphia, the Great Fruit and Produce Street

ported to Jersey City on the lines of the Erie at a cost of ninety-seven cents a hundred.

The Erie railroad has co-operated with merchants in the movement of their freight, except in this one matter, to a remarkable extent. They have granted every facility for quick transit, proper handling at the New York end, and as result have been favored with a large amount of Pacific fruit business. They have nothing to gain and everything to lose by opposition to granting this privilege. If granted the traffic would increase to such an extent that they would lose nothing, even though a considerable amount would move via other railroads. Let it once be known that any of the other railroads entering New York is more favorably disposed to granting privileges to the shippers and the Erie would lose a considerable proportion of the freight which they now enjoy. The Trunk Line Association in New York has been delayed in acting upon this subject until the rules safeguarding the storage privilege on grain should have been adopted by all the traffic associations. Those rules are now practically completed, and it is

believed that as soon as they are put in force the commodity of box apples will be added to lumber, grain and coal, to which those rules apply.

It is a matter of regret that the hearing before the Transcontinental Line Bureau and the consideration of this matter by the Trunk Line Association will come so late in the summer that in all probability the privilege will not be granted upon this coming crop of box apples. We can confidently expect a final decision on this matter by the said two traffic associations within a few months. If favorable our work is completed. If unfavorable we must then present our case before the Interstate Commerce Commission. We have been encouraged by advice of able counsel that in the trial before the Interstate Commerce Commission a favorable decision to include box apples under the same privileges as are now granted to grain will be given. In the event of the necessity of bringing such action the cold storage warehouse companies would appreciate the advantages which will result to them, which has been estimated from \$5,000 to \$10,000 additional income for any warehouse with a capacity of from 25,000 to 50,000 barrels. These warehouses should appoint a committee to represent their interests and should collect funds to defray in a large measure the expenses of the proceeding. We have received many subscriptions from them, showing their support in this matter, but that work has not been actively pushed because we believe that ultimately railroads themselves would see that it was to their advantage to grant this privilege. Certain it is that a general and increasing interest has been awakened among merchants, warehouse men, growers and railroads in this matter, and it is remarkable how little adverse argument on the part of railroad officials has been offered. Let us hope that by another year this matter, to which all of your officials have given so much of their time and energy, may reach a successful conclusion.



Sixth Street Flower Market, Cincinnati, Ohio

Next to this building, running probably two blocks and about fifty feet wide, is the public market building, where the fruit and produce is being sold daily at retail.

A Well Earned Tribute Neatly Presented Wagner

THAT great and worthy services of men oftentimes pass unnoticed is all too true, but once in a while merit is recognized and encouragement is the natural result. Such an occurrence happened at the Detroit meeting of the International Apple Shippers' Association when President Wagner was presented with an apple tree gavel and scroll in recognition of his past services. The address of Secretary R. G. Phillips follows:

There are special incidents in the lives of all of us that stand out as the markers of great sorrows and great

renewed our zeal. From his own truth and courage he has knit the hearts of men in closer union, and because of his splendid leadership we have followed him to new empires, undefeated and undismayed. Gratitude is one of the higher things of life. Sincere appreciation is a gift from the gods. This morning, Mr. Wagner, we come to you in that spirit of gratitude and appreciation to make known to you our respect, our esteem and our very abiding affection. In the name and on behalf of the International Apple Shippers' Association I present you this gavel as the tangible and outward evidence of the feelings of our hearts. It is made from the wood of the old apple tree. In the head are five distinct varieties, the Ben Davis, procured

from Missouri by Mr. Sutton; the Spy from Canada by Mr. Peterson; the Greening from Massachusetts by Mr. Blodgett, and from a prize winning tree in that state; the Spitzenberg from the orchards of E. H. Shepard, publisher and editor of "Better Fruit," which is published at Hood River, Oregon, and the Albemarle Pippin, presented by S. L. Lupton of Winchester and F. D. Wood of Washington, Virginia. The handle is composed of the Baldwin, presented by myself, from the great State of New York and from one of the best orchards in that state.

Sir, this great country of ours, and Canada, is well represented. You have the fruit of kings in the Albemarle Pippin, the food of millionaires in the Spitzenberg—the most perfect apple in the world—and the mainstay of the common people in the Baldwin, the Greening, the Spy and the Ben Davis. You will wield a gavel that extends from the state of the Pilgrim Fathers to the Pacific Coast, and from Canada on the north to the Old Dominion on the south. Carved here upon the sides are apple blossoms, emblematic of the perfect flowering of your hopes and



The Apple Tree Gavel Presented to William L. Wagner
Detroit Convention, August 9, 1911

joys. This morning it is my exceeding good fortune to briefly perform an office that will give to me one of the rare and abiding pleasures of life. "The evil that men do lives after them. The good is oft interred with their bones." So spoke Antony at a time in the world's history when appreciation was a characteristic, but seldom met. It is a far cry, however, to the days of Antony, and in the intervening centuries the milk of human kindness has steadily grown sweeter and more abundant; friendship and respect and affection have increased with the years, and the brotherhood of man has become more than an empty name. I believe this to be the philosophy working upon the hearts of men today. In spite of the complexities of life, or perhaps because of them, the human heart is more and more reaching out after the other fellow. We no longer wait until the grim specter has closed the eyelids in eternal sleep before offering our tribute of appreciation. Devotion to duty, fidelity to the interests committed to one's hands, unselfishness in service of the common good, courage to do the right and lead the way, find their mead of honor and regard. Thereby is the world a better place, and therein are the treasures which are laid up for the hereafter.

Four years ago there was elected to the presidency of this association a man who in the years that have followed has given his best to our service. With unexampled diligence and energy; with wisdom and even balance; with courage and fidelity to duty, he has created a new and more stately structure. Out of his own great inspiration he has inspired us. Out of his own deep sense of fidelity he has

The Apple Tree Gavel

PRESENTED TO

William L. Wagner

Four times President of the International Apple Shippers' Association

BY

the Members thereof

IN

Grateful Appreciation of his Service

COURAGE — ENERGY — FIDELITY — WISDOM — TRUTH

"HE BROUGHT THINGS TO PASS"

Composition

SPITZENBURG - OREGON

BEN DAVIS - MISSOURI

SPY - CANADA

GREENING - MASSACHUSETTS

ALBEMARLE - VIRGINIA

BALDWIN - NEW YORK

Scroll Accompanying Gavel

plans. At the very forefront of the head is a matured apple, symbolical of that full fruition into which we trust those hopes and plans may grow. And here, entwined about them all, are the cool and shady leaves of this most wonderful tree, and at the close of life's fitful day may you rest for a time in their shade, partaking of the fruits of your labor and be content. Upon the handle is a silver band engraved with your name, "William L. Wagner, Detroit, 1911." And here upon this scroll are these words: "The apple tree gavel. Presented to William L. Wagner, four times president of the International Apple Shippers' Association, by the members thereof, in grateful appreciation of his service. Courage, energy, fidelity, wisdom, truth. He brought things to pass."

These things are the soul of friendship and the essence of all progress. Our estimate of you could be expressed in no clearer or better words. It is a privilege to repeat them, and yet they are but the shadow of the real which we would place before you whom we delight to honor. More than all else, a thousand times more than all else, we would leave with you the knowledge that this gavel means to us that subtle spirit of true friendship that has blessed mankind in all ages and without which the days of our pilgrimage are but dust and ashes. You have fought the good fight; you have wrought well. My friend—our friend—we clasp your hand and say with one accord, "God bless you and cause His face to shine upon you."

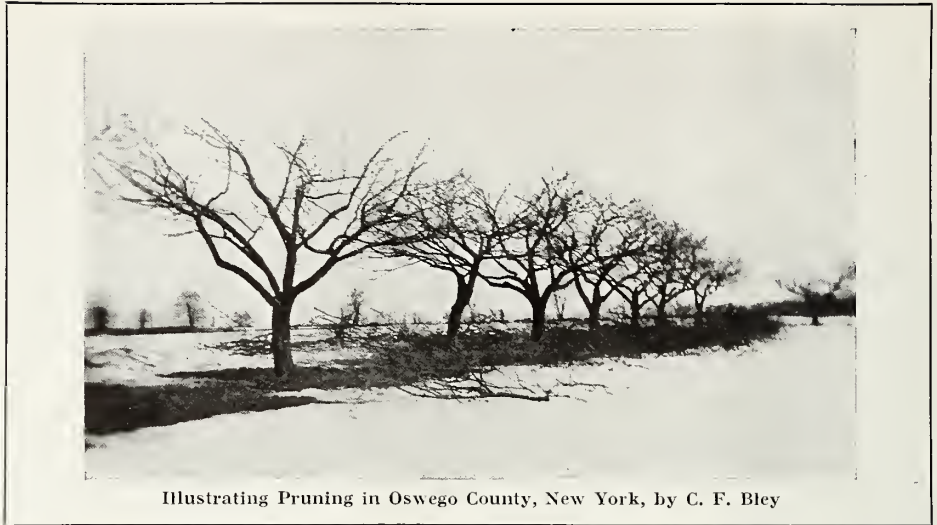
Mr. Wagner responded as follows: Mr. Phillips, and those of you who have known me during the period of time in which we have been associated, know there is more or less sentiment in my makeup. It is needless for me to say that I do not take unto myself the smallest tithe of what you have bestowed. This is no time for me to attempt to respond to you. All that I can do is to say that the four years which will draw to a close within the next forty-eight hours have been enjoyable years. The hearty response I have met has been more than sufficient reward for the time and labor involved. The pleasure has been mine more than yours, and the fact that you have thought of leaving me something to remind me of these four years is most deeply appreciated. It is needless to say the expressions of friendship conveyed are still more deeply appreciated, and I want to take you by the hand in expressing my thanks and as emblematic of taking the hand of each and every member of the association. I thank you.

CHEEK-TO-CHEEK GRADING



EVENTUALLY YOU WILL WANT OUR ADDRESS

SCHENGLER FRUIT GRADING MACHINE CO.
OGDEN, UTAH.



Illustrating Pruning in Oswego County, New York, by C. F. Bley

Practical Pruning Very Important

C. F. Bley, before the Grange-High School Institute, Hannibal, New York

HARDLY any feature of apple culture has been so much over-talked and so vastly under-done as that of pruning. Volumes have been written and wordy platform speeches rendered on the importance and desirability of the operation. But, whether written or spoken, it is evident that the gospel of pruning has not always fallen on fertile soil, for look where we will we see an unlimited field for the tree surgeon's activities. There are, it is estimated, in New York alone twenty-five to thirty thousand acres of neglected apple orchard. It is, however, gratifying to note that the subject of pruning is receiving increased attention and that orchard growers are gradually coming to realize the importance of adopting up-to-date methods of orcharding. Especially is the awakening that is manifest in your own vicinity promising and commendable. Thousands of apple trees this season will have received their first thorough pruning; this will be followed by spraying and tillage. Where in 1910 there was one spraying outfit the noisy hum of a score of power sprayers will be heard when the season of 1912 opens. Neither are your orchard owners rushing blindly into this new venture; they have been fortunate in that a number of practical and valuable object lessons have been carried out under their own observation, right in their midst.

The process of rejuvenating old and neglected apple orchards comprises several factors, among which are pruning, spraying, cover-cropping and thinning of fruit. Chief among these are pruning and spraying. None can say which of these two operations is relatively of greater importance; the two are indissolubly linked together—hand machines as it were. Coming directly to the topic assigned to me, that of practical pruning, I would say that the first requirement for safe and sane pruning is the man—the man behind the saw. After that the know how. A man who is not adapted to the

work will never know how. To become a practical pruner a man should possess an in-born love for a tree. It is not to be inferred from this that professionals or so-called experts can or should do all of the work, but I do say, and I want to say it emphatically, that no orchard owner can afford to do the work himself until he has learned the underlying science. If he cannot engage an experienced pruner to come to his orchard he should offer his own services gratuitously for the privilege of working under a competent pruner. Of course, and woodchopper can trim trees, but it would be idiotic to hold that the inexperienced and uninstructed man can go into an orchard and cut out or leave only such branches and limbs as long experience and observation have taught.

Professor Hedrick, horticulturist at the Geneva station, in circular No. 8, speaking of pruning, says: "Pruning is of almost pre-historic origin and is popularly supposed to be the kindergarten operation of fruit growing, yet as it is practiced it is a hit-and-miss cutting, sawing, chopping and shearing out of the shoots, twigs, branches and limbs." The apple tree, more than any other fruit or forest tree, has a persistent habit of throwing out a great surplus of branches. If this proclivity be not counteracted it will eventually result in gradual but certain suicide by suffocation. The first object, then, in pruning should be to keep the tree vigorous; next, to keep or bring it into a manageable form, and, lastly, to so thin out the entire bearing area that sunlight and spray material may be emitted to every twig and fruit. In the past it has been a common practice to cut out only the dead wood. This is all right so far as it goes, but it does not remove the cause. Such a policy is on a par with the ancient custom of stamping out an epidemic by burying the dead victims of the scourge. There is a notion prevalent that much pruning results in a shock to the tree. Nothing could be further

from the fact; on the contrary, thorough pruning invigorates the tree. Many old and decrepid trees have been given a new lease of life by harsh pruning. Dr. Lattin harvested a fine crop of Tompkins King from practically new tops grown on old stumps. I am aware that such a policy is in apparent conflict with the principle that a proper balance between top and root system should be preserved. The theory sounds very well, but in practice it does not hold good; it is a case where theory and results part company. The shock theory was quite thoroughly refuted by the performance of a nearby orchard that came under Dr. Lattin's control in the autumn of 1910. This orchard is over fifty years old, and for many years prior had not borne a barrel of commercial fruit. His first step was to have the trees thoroughly, yes radically, pruned. So severe was this pruning that the natives predicted disaster. The damage done to the orchard was estimated all the way from one thousand dollars to utter ruin. Now what was the result? His first crop of apples last fall, taken from 150 trees, was represented by 950 barrels of prize fruit, an average of over six barrels per tree; and the present indications point to a bumper crop in 1912. Now really if that is what a "shock" does, would it not be well to shock other orchards hereabouts?

What is the best time for pruning? Generally speaking the best time for pruning is "when the saw is sharp" and you are determined to do a thorough job, after you have learned how. There are only fifty and some odd days in each year that are not adapted to pruning. I will say, however, that summer pruning is growing in popularity. With the tree in leaf the exact condition as to health or disease is more easily discernible and the proper requirements as to thinning are more



Centre Market, Washington, D.C.

Centre Market, Washington, D. C.
One of the finest fruit and produce markets in the United States

readily determined. Besides, it is generally conceded that summer pruning tends to promote the production of fruit buds. In summing up I would say that the sooner we all come to realize that pruning is an art founded on scientific principles the better it will be for the future of apple culture.

STATEMENT OF CYRUS H. McCORMICK
PRESIDENT OF
INTERNATIONAL HARVESTER COMPANY

The International Harvester case differs radically in its facts from all the so-called "trust" cases heretofore decided under the Sherman law. The International Harvester Company was organized in 1902 for the purpose of securing economy in the manufacture and sale of harvesting machinery, and of increasing the foreign trade. It had no water in its capitalization, and it has earned only a reasonable return on its capital—less than seven per cent per annum on the average. The prices of its machines are now substantially the same as in 1902, notwithstanding an increase of fifteen per cent in raw material prices and thirty per cent in wages. The com-

pany has caused a large saving to American farmers in the cost of agricultural implements. It has increased the foreign trade in agricultural implements four fold in nine years; its foreign sales in 1911 were over \$42,000,000. It has not sold cheaper abroad than at home. Its treatment of its customers, its employees, its agents and its competitors has been in accord with the highest standard of ethics and honorable business methods. To the farmer it has given better service and better machines; to agents and dealers a less hazardous and fluctuating business, and to its employees it has given higher wages, improved and sanitary working conditions, insurance against sickness, accident and old age, and a share in the profits.

The charges of misconduct found in the bill have been met and disproved by the company in other cases; and they will again fail, because they are untrue. The Supreme Court of Missouri, in a suit in which these charges were fully gone into, said: "On the whole, the evidence shows that the International Harvester Company has not used its power to oppress or injure the farmers who are its customers." And again: "The price of harvesting machines has not increased in proportion to the increased cost of construction or the increased merit of the machines, and respondent has brought other farm implements into trade. The evidence also shows that the machines manufactured by the International Harvester Company have been greatly improved in quality and the item of repair material has been reduced in price and placed within closer reach of the farmer."

The organizers of this company acted under the advice of able counsel, and in the sincere belief that they were violating no law. If under later decisions it should be held that the law was violated it could only be through the creation of a power to oppress, which has never been exercised.

More than six years ago the company asked for its investigation by the United States government, and opened all its books and records for inspection and furnished all information requested. No suggestion of any change in its business methods has been made to it by the government at any time. Recently a full and frank discussion of the whole situation has been had between the representatives of the government and the company, in an honest desire upon both sides to avoid litigation. Some plan may yet be found which will obviate the necessity of any protracted litigation by satisfying the claims made under the Sherman act without seriously impairing the advantages and benefits secured by the organization of this company. No form of reorganization, however, was suggested by the government which seemed practically possible.

The government has been careful to avoid embarrassment to the foreign business from the litigation; the bill makes no attack upon, and seeks no change in, the export business of the company. The filing of the bill will in no way interfere with the company's carrying on its business the same as heretofore.

Editor Better Fruit:

Enclosed find my check for \$1.00 for "Better Fruit" for one year. I want to congratulate you on your splendid magazine. I appreciate the many good things you have in "Better Fruit" in the interests of all fruit growers. Yours truly, John R. Hill, Des Moines, Iowa.



Auction Sale at Fieclal Hall, Covent Garden, London, England

The Choice Western Box Apples Disposed of at Auction

John Denny, Chicago, before International Apple Shippers' Association Convention, Detroit

THIS subject has been assigned to me, I suppose, for the reason that we have sold considerable quantities of box apples by this method, and possibly I may be expected to defend this way of handling fruit. I will only attempt to give you some of the points in its favor, and also some to the contrary. I do not pretend to try to convince you that this is the panacea for all the evils to which the apple man is heir, any more than I would recommend paregoric for all the human ailments, both of which are undoubtedly very good in their way when used in the proper doses and with proper judgment.

Disposing of box apples by the auction method is comparatively new. It is probably used on the Chicago market greater than any other. The most of you are undoubtedly aware of the manner in which fruit is sold at auction, but to those of you who have not attended auction sales of this kind a word of explanation might be in order. The fruit is unloaded in a large display room, where several cars of other fruit are shown at the same time. Each variety, mark and grade is assorted separately, placed under a separate lot number and a memorandum catalogue furnished to every prospective buyer, stating the number of boxes, variety and grade under each of the various lot numbers. When examining the fruit the buyer marks on this catalogue his inspection of the quality, color, packing, grading and the value, in his opinion, of every lot in the car in which he expects to purchase, and all cars in the entire sale are marked in the same manner by the buyer.

No representation is made or guarantee as to the quality, condition or grade of the fruit, every buyer having the privilege of examining as many packages as he may desire, and it is sold strictly as it is; no rebate or allowance is given or expected by any buyer should the lot or lots that he purchases turn out differently than he expected. The buyers, after thoroughly examining the offerings, take their memorandum catalogues and go to the auction room. Sale usually starts about nine o'clock in the morning, fruit being open for display from four o'clock in the same morning, giving the buyers plenty of opportunity to make careful examination. The auctioneer then asks for bids for the choice of any line in the particular car that is being sold, and when the bid is knocked down to the buyer he has the privilege of selecting any line or lines offered, or every line in the car. After the buyer who has secured the first choice takes the line or lines he desires the auctioneer again asks for bids for the choice of what remains of the car, and so on until the entire car has been sold. Unless it is a car of the same variety and mark it is rarely that the second or third choice brings as much as the first, as naturally

the buyer selects what he considers the best mark in the car. Theoretically, we know of no better way by which the full value of an article can be secured than by selling at auction, where selling in this manner has already been established and where the auction is attended by a large number of buyers of the particular fruit offered, as no one who desires to buy fruit will allow his neighbor to purchase it for less than he considers its value.

The Western box apples are comparatively new fruit, and when they first came on the markets nearly all of them were of extremely high grade, very desirable varieties, and brought extreme prices and were received in limited quantities. Only the very highest class of trade was able to handle them, and the quantity offered was not sufficient to supply the demand, and for a long time the medium class of trade considered box apples were out of their reach and would rarely ever inquire the price. I have occasionally seen times when there was an over-supply of box apples of certain varieties, and these apples were repacked in barrels and sold for more money in a barrel than they would bring in a box, simply for the reason that it was almost impossible to convince the medium class trade that they could afford to buy box apples.

In some of the Northwestern districts, where the growers were not fully familiar with the requirements of the box apple trade, varieties of apples were sent out that were not suitable to box trade and were not of such varieties that the better trade, who usually take box apples, would purchase. When these points began shipping their cars would contain almost every known variety of apples grown anywhere in the country, and almost every grade handled. We found it nearly impossible to sell cars of this kind and secure their value. Nearly

every fruit house, wholesaler or retailer, must specialize on some grade in order to hold his trade, some houses catering to the very highest, some to the medium and some to the cheaper class of trade, and cars that contained the requirements of each of these three were very hard to dispose of to advantage, and it was principally for this reason that we followed this manner of disposing of some of our receipts.

Unfortunately many shippers do not have full confidence in the integrity of houses which handle fruit on a consignment basis, and they are most apt to question the integrity if the consignment happens to sell at an extremely low price at private sale. I am glad to say at this time, in my opinion, this suspicion is entirely unfounded with any reliable or legitimate dealer. As the auction company furnishes an official price realized catalogue to be sent to the shipper this, of course, eliminates any complaint from this score, or for this reason when sold at auction.

When box apples were first offered at auction only very limited quantities were placed on sale. Some buyers attending these sales handled them for a long time, while others had never sold them. They bought a few at a time, found that they could sell them to advantage and gradually increased their purchases, and as their purchases increased they, of course, necessarily had to find new outlets, and a large number of concerns were pushing the sale of box apples, which tended to increase their popularity. As the Northwestern crop increased it has been necessary to proportionately increase the demand, and we know of no means that has been used that has operated in this way to any greater extent than the auction method. A customer who once starts to use box apples rarely discontinues the handling of them. For one reason, the deceptive packing of box apples is practically



Fruit and Vegetable Market at Los Angeles, California
Surrounding this is the wholesale fruit and produce district

unknown. By that we mean that you never find a box of apples with a nice face and after you get down into it a lot of apples hardly fit for cider. The box apple grower realizes the necessity of giving the buyer what he expects, or what he should.

In the last three years, I feel safe in saying, the consumption of box apples on the Chicago market has increased five hundred per cent. Some of our friends criticize this method of selling for the reason they claim that the box apple market is demoralized early in the season by the heavy offerings at auction of inferior box fruit. I believe that instead of being a detriment to the high class box fruit it is beneficial, for the reason that these inferior grades are produced and must be sold to someone, and there is no way in which they can be placed in consumption in a quicker or better manner. If this inferior grade were sold at private sale the dealers and growers would place large quantities of fruit in cold storage that would not be suitable for this purpose and would later on be forced into the market, which would tend to make a demoralized market the entire season through. Now, an inferior grade of box apples does not mean the same as an inferior grade of barrel apples, as the lower grades of the boxes are almost, if not quite, as good as the better grades of barrel stock; and considering their actual value the box apples of inferior grade usually bring more than the same grade and variety in barrels.

In my opinion, one of the most serious criticisms against the auction method is that it tends to take the business from the hands of the regular fruit house and turns the business toward the hucksters, who are buyers to some extent in all fruit auction sales. From my experience I cannot see where there is anything serious to fear from this, as I believe the huckster will increase the demand more than the amount that he will buy, and instead of being a detriment is really an advantage to the jobbing house. There is a certain tendency of the time to draw the producer and consumer as near together as possible. The idea is a very good one, and every middle man between these two ends should be eliminated as much as conditions warrant. It is manifestly impossible for Mr. Jones, the consumer, when he wants a peck, a box or a barrel of apples, to go to Mr. Smith, the producer, in New York or Washington or some other state, to buy this fruit direct, and the middle man will be required in the handling and the distributing as long as apples are grown. The fruit dealer is as much a part of the producer as the man who actually owns the orchard, for the reason that the apples at producing points have practically no value until they are placed in the hands of the consumer. Both the dealer and the grower are absolutely necessary, and are really partners in the entire transaction. There has been a feeling in the past of antagonism or opposition between



Faneuil Hall Market, Boston, Massachusetts
The jobbing houses occupy the first floor, which is a semi-basement, and entire sidewalks. The retail markets are located in the interior of the building on the first floor, and in the second story are situated the offices and the large meeting room for the fruit trade.

the dealers and growers that is entirely out of place. The buyers attempt to make the crop look large and convince the grower that he should accept low prices, the grower, of course, taking the opposite position. If the dealer buys the coming crop of apples for less than its value it will only reflect on him the year following, as the grower will feel that he has not been justly treated and will endeavor to get back at the dealer and try and secure extreme prices on the next crop, which is no more than reasonable to expect. If the buyer should buy the fruit for less than its actual value he only tends to weaken the grower and does not permit him to produce the grade that he would had he received full value for his crop. On the other hand, if the grower should accept or should insist and finally make buyers pay more for a crop than it was worth, the buyers thereby entailing heavy losses, they would only weaken their distributing arrangements, and in consequence they would necessarily be forced to accept a lower price the year following than the law of supply and demand would justify, the grower thereby suffering on account of lack of competition the following season. We must realize that the dealers and growers are both partners in the production, each absolutely necessary to the other, and it is as necessary for them to deal as equitably with one another as two partners of any business concern.

Every business man recognizes the fact that if he desires to be successful he must deal honestly, fairly and equitably with the customer to whom he sells, but it is to be regretted that this idea is not always in mind when the dealer purchases from the grower. Very few of us would willingly over-

charge any of our customers in their purchases from us, but all of us are willing to buy from the grower at the lowest price we can secure them, regardless of their value, and, under the circumstances, how can we expect that the grower will not, or should not, endeavor to get from us every cent he can and use every scheme possible to do so for the article which he is selling, regardless of its value? When the time comes when the dealer and grower will endeavor to meet one another in a spirit of justness and fairness our business will be much more pleasant and profitable than at present.

If it were possible to select a committee from among the buyers and growers who had canvassed all apple producing sections carefully, and they should recommend an average price at which the crop should be sold that would be recognized and accepted both by buyers and growers as a fair basis on which to trade, I feel confident that it would mean millions of dollars in benefit to the growers and dealers. Any season that the buyers are forced to pay more for the crop than its actual value they suffer heavy losses, and it may be years before some of us fully recover; or any season that the buyers secure the fruit for considerable less than the value, the grower is unable to carry out his business arrangements and improvements in his production that he otherwise would, the advancement in the production suffering to greater extent, thereby injuring both the grower and the dealer. In other words, each of us is killing the goose that lays the golden egg. I am only in hopes that the coming year, and every year thereafter, will be such that the growers receive and the buyers purchase at a fair and equitable price.

BETTER FRUIT

HOOD RIVER, OREGON

OFFICIAL ORGAN OF
THE NORTHWEST FRUIT GROWERS' ASSOCIATION
A MONTHLY ILLUSTRATED MAGAZINE
PUBLISHED IN THE INTEREST OF MODERN
FRUIT GROWING AND MARKETING
ALL COMMUNICATIONS SHOULD BE ADDRESSED AND
REMITTANCES MADE PAYABLE TO

Better Fruit Publishing Company

E. H. SHEPARD

EDITOR AND PUBLISHER

H. C. RITZ, Assistant Editor

H. E. VAN DEMAN, Contributing Editor

STATE ASSOCIATE EDITORS

OREGON

A. B. CORDLEY, Entomologist, Corvallis

C. I. LEWIS, Horticulturist, Corvallis

P. J. O'GARA, Pathologist and Entomologist,
Medford

WASHINGTON

A. L. MELANDER, Entomologist, Pullman

COLORADO

C. P. GILLETTE, Director and Entomologist,
Fort Collins

E. B. HOUSE, Chief of Department of Civil and
Irrigation Engineering, State Agricultural
College, Fort Collins

E. P. TAYLOR, Horticulturist, Grand Junction

IDAHO

W. H. WICKS, Horticulturist, Moscow

W. S. THORNER, Horticulturist, Lewiston

UTAH

DR. E. D. BALL, Director and Entomologist,
Logan

LEON D. BATCHELOR, Horticulturist, Logan

MONTANA

O. B. WHIPPLE, Horticulturist, Bozeman

CALIFORNIA

C. W. WOODWORTH, Entomologist, Berkeley

W. H. VOLCK, Entomologist, Watsonville

BRITISH COLUMBIA

R. M. WINSLOW, Provincial Horticulturist,
Victoria

SUBSCRIPTION PRICE:

In the United States, \$1.00 per year in advance
Canada and foreign, including postage, \$1.50

ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27,
1906, at the Postoffice at Hood River, Oregon,
under Act of Congress of March 3, 1879.

The Dealer's Number.—It has always been the aim of "Better Fruit" to do everything in its power to bring the grower and dealer closer together. Both should understand each other's point of view; each should appreciate the difficulties which the other has to contend with. That the dealer has his troubles as well as successes must be admitted by all who know anything about marketing fruit. While the greater part of "Better Fruit" is usually devoted to methods pertaining to fruit growing, it has always been our aim to publish articles, statistics and estimates (as conservative as possible), believing the same will interest both the grower and the dealer. That the grower may better understand the dealer the July edition of "Better Fruit" contains, almost exclusively, articles by men who have been in the trade for many years. These articles are upon subjects of importance to the trade, which are of benefit to the trade, and whatever helps the trade to secure better prices is in the end a help to the fruitgrower. In addition, we are illustrating this edition with scenes from the produce streets of nearly all of the principal cities in the United States. We published a similar edition last year which was very popular, but since that time we have had many new subscribers added to our lists, both among the fruitgrowers and among the dealers, and therefore we are repro-

ducing some of the cuts that appeared last year for the reason that they are the most typical scenes which could be secured. We hope and trust that this edition will meet with the approval of everyone and that it will be valuable both to the dealer and the fruitgrower.

Cleanliness.—Cleanliness is next to Godliness. In these days of betterment and improvement much attention is being given to cleanliness. There is nothing more conducive to health than a thoroughly clean house with pure air, free from all diseases and germs. A vacuum cleaner that can be used by hand has already found a very ready demand on the part of all people who desire cleanliness, but something new in this line is the result of comparatively recent progress. It is the Tucc Air Cleaner. The machinery is installed in the basement; pipes run to each room in the house so that a hose can be attached and every article in the room, rugs, carpet, furniture, floor, wall and ceiling, can be thoroughly cleaned at a minimum cost in labor and time. This cleaner can be installed after the house is built or while it is being built. In the interest of the general health of the fruitgrowers and farmers, and the public in general, we feel justified in asking the fruitgrowers to investigate the Tucc Air Cleaner. Mr. Ren H. Rice is manager of the company and his address is 301 Peyton Block, Spokane, Washington. Mr. Rice is well known, having been manager of the National Apple Show of Spokane for several years. His genial manner, pleasant ways and fair, square treatment of all fruitgrowers who entered for competition and all fruitgrowers who attended the shows have won for him a host of friends.

The Apple Crop.—In the June edition we published statistics as compiled during the month of May. At the time these statistics were published the estimate was generally considered to be a reasonably fair one of the expected crop this year. Cold weather prevailed during the blossom time, interfering to a greater or less extent with pollenization. More recent estimates indicate that the crop will be considerably less than shown in the June edition. For instance, Hood River was put down for 1,500 cars. A number of prominent people in Hood River Valley have made a careful inspection of a number of orchards and are now placing the estimate at 1,000 cars. Yakima Valley was put down, for apples and pears, 6,000 cars. The last estimate furnished by Mr. H. M. Gilbert, appearing in the Yakima Republic, put the crop of apples and pears at 5,100 cars. Other districts have not been heard from with definite figures, but more or less shedding has been reported from a number of sections, and therefore it would seem that the estimate given in the June issue of "Better Fruit" was an over-estimate in some sections. However it is still difficult to give estimates of a really

definite nature, as quantity will in a large measure depend upon the size of the apples. Mr. H. M. Gilbert has furnished a very interesting estimate of the crop in Yakima Valley, as follows: Apples, 4,600; peaches, 1,300; pears, 500; prunes, 150; plums, cantaloupes and cherries, 450; a grand total of 7,000 cars. "Better Fruit" has always given statistics or estimates for the actual number of cars that will be shipped out of the different districts, which does not include home consumption. While there is a difference of opinion whether or not the home consumption should be included, still as far as the East is concerned it is the quantity that is shipped East and the Eastern demand that affects prices. We make this statement so there may be no misunderstanding, and we desire to say in addition that it is not only difficult but next to impossible to ascertain any reasonable estimate of the total amount of fruit consumed in any one state. The number of cars of home-grown fruits that are shipped to any of the cities in the state, of course, can be determined, but the total quantity of fruit that is grown and hauled to town in wagons, the quantity of fruit that is consumed by the fruitgrowers themselves, and that peddled out to the different cities and towns in the different fruit sections, is a quantity which is impossible for anybody to determine definitely.

Sanitary Plumbing.—War is being waged by the general public on the ever-present fly which is always a carrier of all kinds of disease. As a rule farmers have been rather negligent in looking after outbuildings. Chloride of lime is one of the splendid disinfectants and should be pretty freely used around the home. An article in the way of a sanitary closet, adaptable to farmers' use, is being put on the market, and in the interest of health we feel it our duty to call attention to an advertisement, which appears elsewhere in this edition, of the Sanitary Closet Co. of Portland, Oregon.

A New Manager

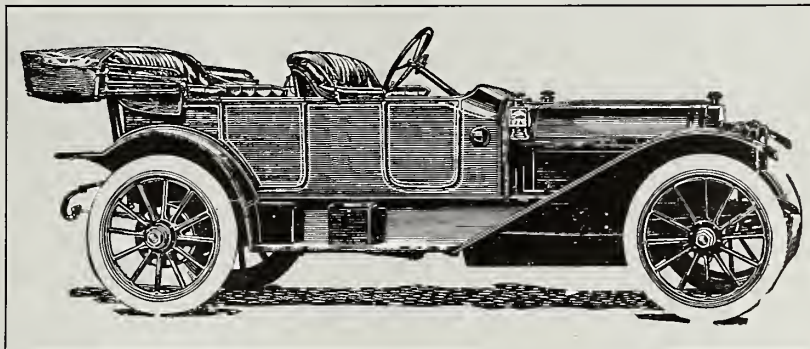
THE new manager of the Hood River Apple Growers' Union, Mr. Wilmer Sieg, who was recently elected, arrived in Hood River July 3 and assumed his duties. Mr. Sieg's identification with the fruit business for twenty-five years has brought him in touch with the necessities of the trade and his knowledge of the wants of the buyers will enable him to advance valuable ideas to the growers comprising the Hood River Apple Growers' Union at this time, when rules for grading and packing are being formulated. Mr. Sieg realized the fact that he was coming into a territory of well established quality and that the name of Hood River as furthered by the Apple Growers' Union is synonymous with the "perfect apple." The improvements of grading and packing to be taken into consideration at this time are with a

A Big Fruit Crop This Year "Spells" "Lots of Money for the Fruit Grower"

**You'll Want
An Auto**

**EVERYBODY
DOES**

**INVESTIGATE
The *Mitchell*
4 and 6
Cylinder Cars**



Mitchell
Represents

**78 Years'
Manufacturing
Experience**

**11 Years'
Automobile
Experience**

**4 Years'
6-Cylinder
Experience**

Represented by

**PORTLAND
SEATTLE
SPOKANE
BOISE**



**IN OREGON
WASHINGTON
AND IDAHO**

30 Years in Business in the Northwest

view of more fully meeting the ideas of the buyer and promoting a greater distribution of the product. Hood River has become a household word throughout the East as one of the oldest and most reputable apple districts in the Northwest, and it owes its present standard, which is a recognized standard with the trade, to the vigilance and care-taking of the Hood River Apple Growers' Union, a highly perfected and successful association. Mr. Sieg says he cannot help but feel optimistic of the future and that the assurance given him by the growers as to their willingness to co-operate with him to all that may tend to further the fame of Hood River and its product is most gratifying and sincere. The flavor of the Hood River apple being that of the flavor of the real apple and its unlimited keeping qualities, as evidenced by the fact that apples given him at the present time are just as perfect as when they were picked in October, leads him to think he has reached the Mecca of his ambition. With the thorough co-operation of the Union and with the promise of support from the representative buyers in all sections of the country, Hood River, under the auspices of its Union, should be well launched on the road to further and greater prosperity. The Hood River Apple Growers' Union goes into the field for the season of 1912 with a strong following of growers who are enthusiastic in the thought of still further increasing the standard of excellence maintained in the past.

Lithography



Bearing this label is the kind of printing that one likes to use, for it is good printing all through. Send for samples of what you need

**Labels, Cartons, Cut-Outs, Posters
and Commercial Work**

Schmidt Lithograph Co.

SAN FRANCISCO

PORTLAND

SEATTLE

LOS ANGELES



THE START

Look at the Photographs

The Picking Bucket, which the growers say is the

One Great Success



PARTLY OPENED

Notice the ease of operation—the possibilities of placing the fruit you have given so much care into your boxes **without bruises and scratches.**

That means money saved for you. You will also save labor, or the cost of labor, in the extra amount you can pick with this bucket.

It means a higher standard—better fruit. Not an experiment—a practical, permanent orchard appliance.

A Money and Fruit Saver

Ask your dealer (the prominent hardware store) to show you the bucket, or send us \$1.50 and we will forward one by express.

PALMER BUCKET CO., Hood River, Oregon

An industrial romance that had its beginning in the forests of Minnesota, Wisconsin and the Mississippi Valley and whose current chapter is running in the last stand of the virgin tree in the United States, the great Northwest, is the history of the Hewitt-Lea-Funck Company of Seattle. The story is that of fathers who bought timber tracts in Washington, Oregon, Idaho, California and British Columbia when the fir and cedar there were little valued because there were no railroads to haul out the finished products, and that of sons who, coming into the management of these vast properties, decided to do away once for all with the wasteful method of distributing their product through the wholesaler, the jobbers, the trav-

eling salesman, the commission man and the retailer, and to sell the lumber, ready in all its forms to put into the building, direct to the farmer and the contractor. Thirty years ago the names Hewitt, Lea and Funck were well known in the Middle West. These three men made good lumber and sold it to the wholesaler in the good old-fashioned way. They prospered, and as they prospered they had the foresight to put their spare capital into tracts in the Northwest. As reorganized, including three sons of Mr. Hewitt and one of Mr. Funck, this corporation has six big mills in the Northwest, billions of feet of standing timber, and hauls its own logs over its own rails with its own locomotives to its own mills. There it works the logs into every finished form that goes into a house. And it sells this product direct from the factory to the user, carrying besides paints and builders' hardware. This company is the latest as well as the largest of several Northwestern concerns that have adopted this method of direct distribution. The Hewitt-Lea-Funck Company has done it because the young men, taken into the business after they had been severely trained in every department of it, found that high prices for the consumer were prevailing despite

improved transportation facilities; that the farmer was showing an increasing tendency to purchase direct of the producer, and that the retailer was using high-handed methods, buying of the mills only when prices were low, but ever keeping up the levy on the consumer. Frightened by the advent of this newer and larger factor in the field of direct distribution in the lumber business, the roar of protest from the retailers, expressed through their organs, has redoubled in volume and intensity. Efforts are concentrated on devising ways of "protection" against what is termed "foreign competition." The slogan of the Hewitt-Lea-Funck Company is "High in quality, low in price, first in shipment."

Situation Wanted

An experienced man (graduate in horticulture) desires to develop large orchard tracts on a profit-sharing basis. Willing to work for a reasonably low salary until trees come into bearing. Splendid references. Address Box 174, Forest Grove, Oregon.

For Sale by Owner

Eight acres at Maryhill, Washington. Deep black soil. Four acres set to 3-year-old winter apples, with peach fillers; balance plowed. Well fenced. Good well and windmill.

For further particulars apply
E. S. SILSBY
Maryhill, Washington

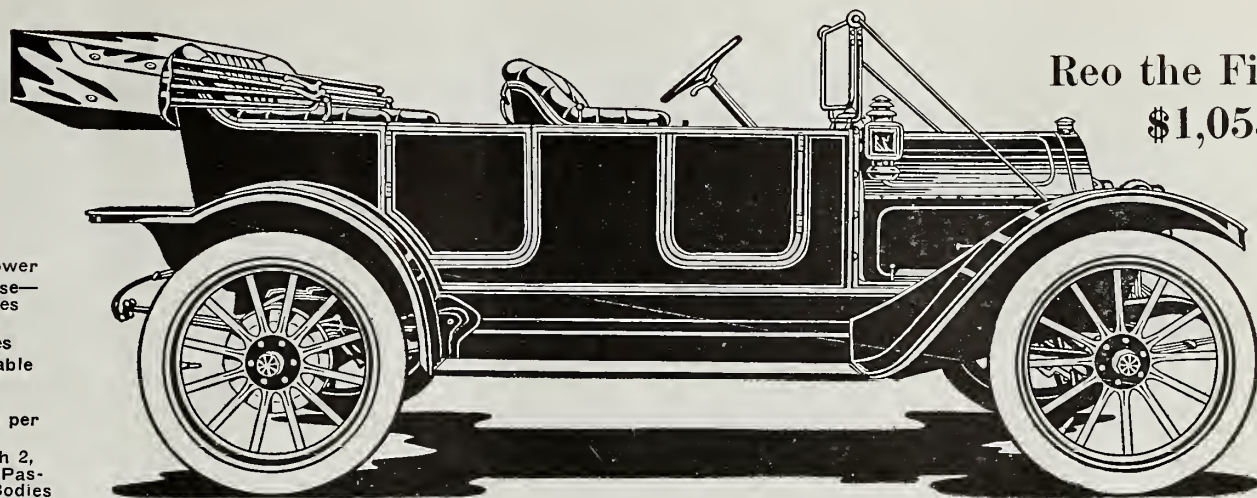
SHIP YOUR APPLES AND PEARS TO THE PURELY COMMISSION
AND ABSOLUTELY RELIABLE HOUSE

W. DENNIS & SONS LIMITED

Convent Garden Market
LONDON

and

Cumberland Street
LIVERPOOL



Reo the Fifth
\$1,055

30-35
Horsepower
Wheel Base—
112 Inches
Wheels—
34 Inches
Demountable
Rims
Speed—
45 Miles per
Hour
Made with 2,
4 and 5 Pas-
senger Bodies

Top and windshield not included in price. We equip this car with mohair top, side curtains and slip-cover, windshield, gas tank and speedometer—all for \$100 extra. SELF-STARTER, IF WANTED, \$20 EXTRA

The 1912 Sensation

By R. E. Olds, Designer

Five Times Oversold in May

I have built automobiles for 25 years. Reo the Fifth is my 24th model.

I have watched all the ups and downs of Motordom—all the comings and goings, the successes and failures.

But I never saw a demand like that which developed for Reo the Fifth this year. In April and May we could easily have sold five times our factory output.

My Final Car

Month after month I have told you the story, so you know why this call has come.

I built this car as my final creation, as the cap-sheaf of my career.

In this car I embodied the best I had learned from 25 years of car building.

This car marked my limit. Every detail showed the best I knew.

I analyzed all steel that went into it. I tested the gears in a crushing machine with 50 tons' capacity.

I used Nickel Steel axles—Vanadium Steel connections. I equipped the car with 15 Roller bearings.

To every part I gave big margins of safety. The carburetor I doubly heated for low-grade gasoline.

I Watched It

Then I took personal charge of the building, for I pledged my good faith on this car.

I saw that the parts were ground over and over, until we got utter exactness. I saw that each car got a thousand inspections.

The engines were tested for 48 hours. Each finished car was tested over and over, until it proved utterly perfect.

We did all this with every car, in the midst of the April rush. We do it today, and shall always do it so long as I build this car.

The Center Control

Then we equipped this car with my new center control. All the gear shifting is done by a small, round lever between the two front seats. It is done by moving this lever only three inches in each of four directions.

I got rid of all side levers, so the front doors were clear. Both brakes are operated by foot pedals.

In these ways I made possible the left-side drive.

Now nearly all makers announce for next season the center control and the left-side drive. But none can use my center control. They still use the old-time levers.

The Amazing Price

Then we offered this car—the best I can build—for \$1,055. And nothing on the market could begin to compete with it.

The car is long, roomy and powerful. The wheels are big. The body is finished in 17 coats. The upholstery is the height of luxury.

The demand for this car will grow and grow as the facts become better known. I believe that each car will sell twenty.

But the price of \$1,055 can't last long. The price is too low for profit, and materials are advancing. Before very long advancing costs will compel us to ask something more for this car.

1,000 Dealers

Reo the Fifth is shown by dealers in a thousand towns. If you will write for our catalog, showing the various styles of body, we will tell you where to see the car. Address

R. M. Owen & Co., General Sales Agents for **Reo Motor Car Co., Lansing, Mich.**
CANADIAN FACTORY, ST. CATHARINES, ONTARIO



Mr. A. Treadwell's farm buildings, Strawberry Point, Iowa, stained with Cabot's Creosote Stains. Roofs, moss-green; walls, bark-brown and red. The job cost only half as much as paint, and the colors are handsomer and the wood is much more thoroughly preserved.

Beautify Your Buildings—Save Half Your Paint Cost

Preserve Your Woodwork—Save Half Your Labor Cost

The high cost of linseed oil and other ingredients makes the price of paint higher than ever before or the quality poorer. *Cabot's Creosote Stains* are better than paint, especially for farm buildings, and much cheaper. They cost less than half as much as paint, and they can be applied twice as fast, so that the labor cost is only half as much as painting. Anyone can put them on, with a wide flat brush that covers the surface very rapidly. They are made of the finest and strongest colors—all natural pigments that will wear as long as colors can—thoroughly ground in linseed oil. Their liquid is refined Creosote, "the best wood preservative known," and this penetrates the wood and protects it against decay. Paint is a surface coating and has no real penetrating preservative quality, but the Creosote in Cabot's Stains goes into the wood and tans it like leather. The handsome colors used on the above buildings cost 60c and 75c a gallon in Boston, with a few cents more for freight, and the owner put them on at half the labor cost of painting. He got fine, durable colors, much softer and richer than paint, and thoroughly preserved his woodwork, and every building that he stained was sterilized by the Creosote, which also destroys insects and bacteria and makes the premises wholesome and healthful. *Cabot's Stains* are ideal for farm buildings—cheap, lasting, preservative and sanitary. They are used on all kinds of wood: shingles, siding, boarding, fencing, etc.

We will send you free a package of stained wood samples, showing the colors, and catalogue giving full information. Send your address.

SAMUEL CABOT, Inc., Manufacturing Chemists, Boston, Mass.
PACIFIC COAST DISTRIBUTORS

Timms, Cress & Co., Portland

Waterhouse & Price Co., San Francisco

S. W. R. Dally, Seattle

P. H. Mathews Paint House, Los Angeles

Agents all over the country. Also, *Conserve Wood Preservative, for Posts, Sills, Planking, etc.*

Duluth Fruit Marketing Conditions

By A. W. Worley, Manager The Minnesota Fruit Company

ANY remarks in regard to fruit marketing conditions here should be prefaced by a few words relative to the city's advantages in a general way. As a city prospers and extends its commercial sway, so does consumption increase within its territory to the consequent gain of the commercial center. Therefore the following facts are pertinent: Duluth is the commercial capital of a rich empire here in the Northwest. Near the center of the continent, she stands at the head of navigation on the Great Lakes—"where sail meets rail." Nature has given her not only a strategic location but has endowed her as well with a wonderful natural harbor, guarded from the storms of Lake Superior (the largest inland fresh water sea in the world) by Minnesota and Wisconsin points—pine-covered ribbons of sand running out toward each other from the opposite shores, and separated by the so-called "natural entry" to the harbor—the former seven miles long, the latter more than half that length. From this

port goes eastward annually thirty million tons of iron ore (thrice the quantity shipped ten years ago); eighty to one hundred million bushels of wheat (the elevator storage capacity is over thirty million bushels), making Duluth the largest primary market in the country. On their return up the lakes the six hundred-foot ore-carrying steamers bring annually to Duluth eight to ten million tons of coal.

In the past Duluth's transportation advantages have been most notable, and in this her growth continues with great strides. Ten railroad lines enter the city, which is a terminus of each. The Northern Pacific Railway, the Great Northern, the Northwestern, the Duluth, South Shore & Atlantic, the Duluth & Iron Range, the Duluth, Mesaba & Northern, the Chicago, Milwaukee & St. Paul, the Minneapolis, Saint Paul & Sault Ste. Marie, the Canadian Northern and the Wisconsin Central make the city the hub of a wheel of which they are the spokes. Within sixty to one hundred and

twenty miles are the iron ore ranges—the Mesaba, the Vermillion and the Cuyuna. In 1910 32,000,000 tons of ore was brought from the range mines, valued on the docks at four dollars a ton, or a total valuation for the season's shipments of \$128,000,000, with which compare the \$96,000,000 output of the gold mines of the United States and Alaska. It is estimated the iron mines will last one hundred years. The earth and rock moved on the Minnesota ranges would build another Panama canal every five years.

By virtue of Duluth's transportation advantages, due to its position "where rail and water meet," and its proximity to the vast iron ore deposits, where low-priced fuel supplements almost inexhaustible water powers now only partly developed, the city is becoming the seat of extensive manufactures. The United States Steel Corporation is now rushing to completion (at a cost of \$10,000,000, with \$5,000,000 more for accessories) a modern steel plant that will rival that at Gary, Indiana. The steel corporation has taken advantage of the situation first. Besides increased local trade that will result from the employment of several thousand more men, the city's wholesale trade will expand and business will be attracted to the city as a result of its steel business. And other manufacturing enterprises will be drawn to the city—if the head of the lakes is a good location for a big steel plant it is good enough for hundreds of smaller factories, is pretty good reasoning. Duluth should make a greater growth in the next five or ten years than in the last twenty-five or thirty years. Her population is now close to 90,000, with as many more people on the "iron" ranges (directly tributary to Duluth), and half the number in Superior, on the other side of the St. Louis River. In the ten years from 1900 to 1910 the increase in population amounted to forty-eight per cent. With all of its commercial advantages, Duluth is in the midst of a great wilderness. There is a large population in the cities of Northern Minnesota and Northern Wisconsin, of which Duluth is the trade center, but agricultural development has scarcely begun. Consequently we must depend on other sections of the country for our fruits and provisions. This condition, notwithstanding local "back-to-the-land" agitation, must continue for many years, and it is unlikely we shall ever produce our own fruit in this locality.

The fruit and commission business of Duluth is in the hands of strong and prosperous concerns, progressive in policy and with extensive facilities and ample capital. We have a new and modernly equipped cold storage plant, with a capacity sufficient for the needs of the city's future growth. The Minnesota Fruit Company is among the leaders on Michigan Street, the city's "Commission Row," and foremost in handling and boosting Western boxed fruit, doing an extensive business not only locally but also on the iron

ranges, and with the cities at the Canadian head of the lakes, Port Arthur and Fort William, now enjoying great prosperity and making rapid growth. Over seventy-five per cent of Eastern apples shipped to the West and Central West come to Duluth, owing to cheaper steamship freight rates up the lakes as compared with rates for car shipments. Duluth annually receives about 300 cars of peaches, plums, grapes and cherries; 500 cars of citrus fruits, 1,000 cars of bananas, 3,000 cars of apples, and handles large quantities of cabbage and dry onions and many cars of potatoes. We have no public market here, nevertheless we successfully merchandise the most highly perishable products. The Minnesota Fruit Company specializes in apples, bananas and citrus fruits, and in addition does a big volume of business in potatoes, small fruits and vegetables, and always finds a ready market for the best quality of goods in all lines. The house has grown steadily and built up a big trade of its own, and with Duluth's splendid prospects for rapid expansion, and in view of the returning era of good times to the country as a whole, the company stands ready to reap the advantages of the situation and is assured of continued prosperity.

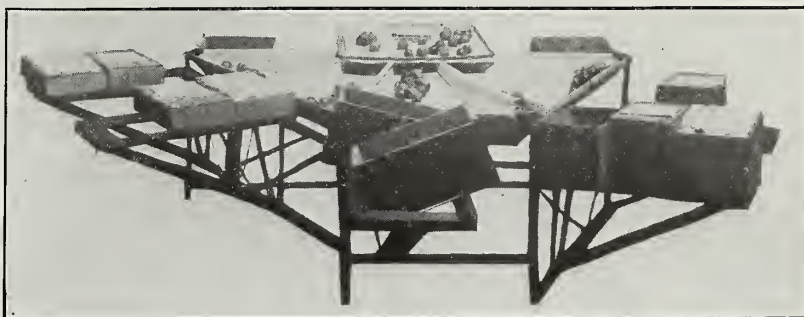
Association Officers, 1912

Officers of the Western Fruit Jobbers' Association for the year 1912: President, R. H. Pennington, Evansville, Indiana; first vice president, J. E. Stewart, St. Louis; second vice president, E. H. Emery, Ottumwa, Iowa; third vice president, Charles A. Kerr, Chicago; treasurer, W. M. Roylance, Provo, Utah; secretary, William D. Tidwell, P. O. box 1325, Denver. Directors—R. H. Pennington, Evansville; J. E. Stewart, St. Louis; E. H. Emery, Ottumwa; Charles A. Kerr, Chicago; W. M. Roylance, Provo; Samuel E. Lux, Topeka; C. G. Trimble, Omaha; Jac Stich, New Orleans; T. A. Cargill, Houston, Texas; C. B. Bills, Sacramento, California; J. M. Walker, Denver. Executive Committee—R. H. Pennington, S. E. Lux, C. G. Trimble, J. E. Stewart, J. M. Walker.

Officers of the International Apple Shippers' Association for the year 1912: President, Edward N. Loomis, New York; vice president, W. H. Blodgett, Worcester, Massachusetts; treasurer, W. M. French, New York; secretary, R. G. Phillips, 612 Mercantile building, Rochester, New York. Executive Committee—A. Warren Patch, Boston; A. E. W. Peterson, Toronto; R. H. Pennington, Evansville; S. A. Wheelock, Chicago; E. C. Cook, Baltimore. Special Vice Presidents—J. A. Stroud, Rogers, Arkansas; Edmund Peycke, Los Angeles; J. M. Walker, Denver; George Shuttleworth, London; Carl Basedow, Hamburg; George E. Crum, Lewiston, Idaho; F. H. Simpson, Flora, Illinois; N. G. Gibson, Chicago; J. G. Schlotter, Indianapolis; John F. Tanner, Davenport, Iowa; George C. Richardson, Leavenworth, Kansas; E. H. Bowen, Louisville; George W. Davison, New Orleans; E. W. J. Hearty, Boston; F. A. Wing, Waterville, Maine; Walter Snyder, Baltimore; C. L. Randall, Oxford, Michigan; C. R. Staey, Minneapolis; G. P. Haeisen, St. Louis; A. A. Lasch, Lincoln, Nebraska; Albert T. Repp, Glassboro, New Jersey; C. W. Kimball, New York; D. S. Beckwith, Albion, New York; Herbert Oyler, Kentville, Nova Scotia; L. K. Sutton, Columbus, Ohio; William Dixon, Hamilton, Ontario; E. H. Shepard, Hood River, Oregon; E. T. Butterworth, Philadelphia; D. Canale, Memphis; W. M. Roylance, Provo, Utah; F. A. Shryock, Winchester, Virginia; F. E. Thompson, North Yakima, Washington; J. M. McCoach, Huntington, West Virginia; R. Stafford, Milwaukee.

Officers of the National League of Commission Merchants of the United States for the year 1912: President, Carl W. Kimball, New York; first vice president, William B. Geroe, Toledo, Ohio; second vice president, J. J. Castellini, Cincinnati; secretary, John H. Shreve, Washington, D. C.; treasurer, S. F. Padgett, Richmond, Virginia; business manager, R. S. French, New York. Advisory Board—William

For A Better Pack at A Lower Cost



The Sykes Sorting and Packing Table

FOR ALL KINDS OF FRUIT

Write to-day for particulars of how to better your pack at a less cost per box

THE HARDIE MANUFACTURING CO. 49 N. Front Street
Portland, Oregon

S. Gavan, Baltimore; James S. Crutehfield, Pittsburg; Wilmer Sieg, Hood River, Oregon; A. Warren Patch, Boston; P. M. Kiely, St. Louis.

"Appco" Standard Apple Packing

Bulk measure is not and never will be satisfactory to buyer or seller. Not only does measure vary, but the rehandling is very inconvenient and as a rule is unsightly and unsanitary. One dozen No. 3 Hood River Jonathan apples in the Appco standard dozen box, as illustrated, is sealed by the packer and delivered to the consumer as originally sealed. Instead of buying 10 or 25 cents worth of apples, the consumer buys a dozen No. 3 Jonathan or Northern Spy or other variety. The more apples you can get in the consumer's home at one time the more consumed. The increase in consumption as a result of selling in one-dozen boxes will justify the cost of the Shipsafe. Figure 1 shows one dozen three-inch

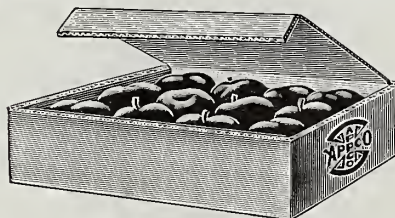


Figure 1—Ready of Close

apples in the Appco standard dozen box. The lip or overlap of the cover allows for slight variation in size. Close and seal with a gummed label, which carries your name or trade mark or your association name, the name of the variety and the size—3-inch, 3½-inch, 4-inch, etc., according to sizes established by the grading machines. Figure 2 shows the sealed box. The cellular construction of the Appco standard dozen box makes the box rigid—more rigid than the thin wood boxes. Proof against cold and heat; no refrigeration is required. Should you pack at a time when ventilation is required, the proper holes can be punched. Figure 3 shows six Appco stan-



Figure 2—Closed and Sealed with Grower's Label

dard dozen boxes enclosed in a larger Appco Shipsafe. Fitting snugly, the covers are folded over and quickly glued to place, or if but temporary closing is desired, the seam taped with gummed paper tape. In either case the package will stand the roughest handling without even bruising the apples. The hundreds of air cushions take up every kind of shock. Such a package will ship from Hood River to New York without refrigeration against heat or cold. For cold weather shipping no ventilation is required. For early fall or warm weather the boxes may be ventilated to suit.

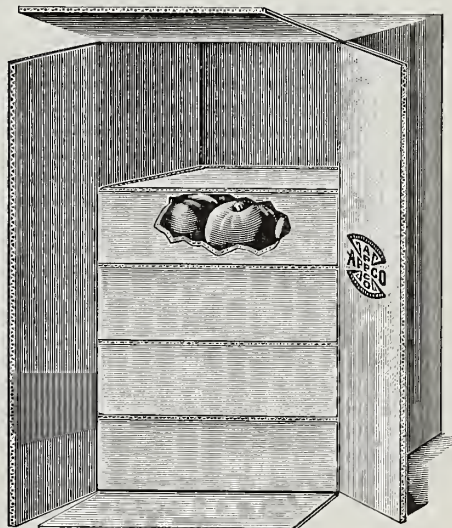
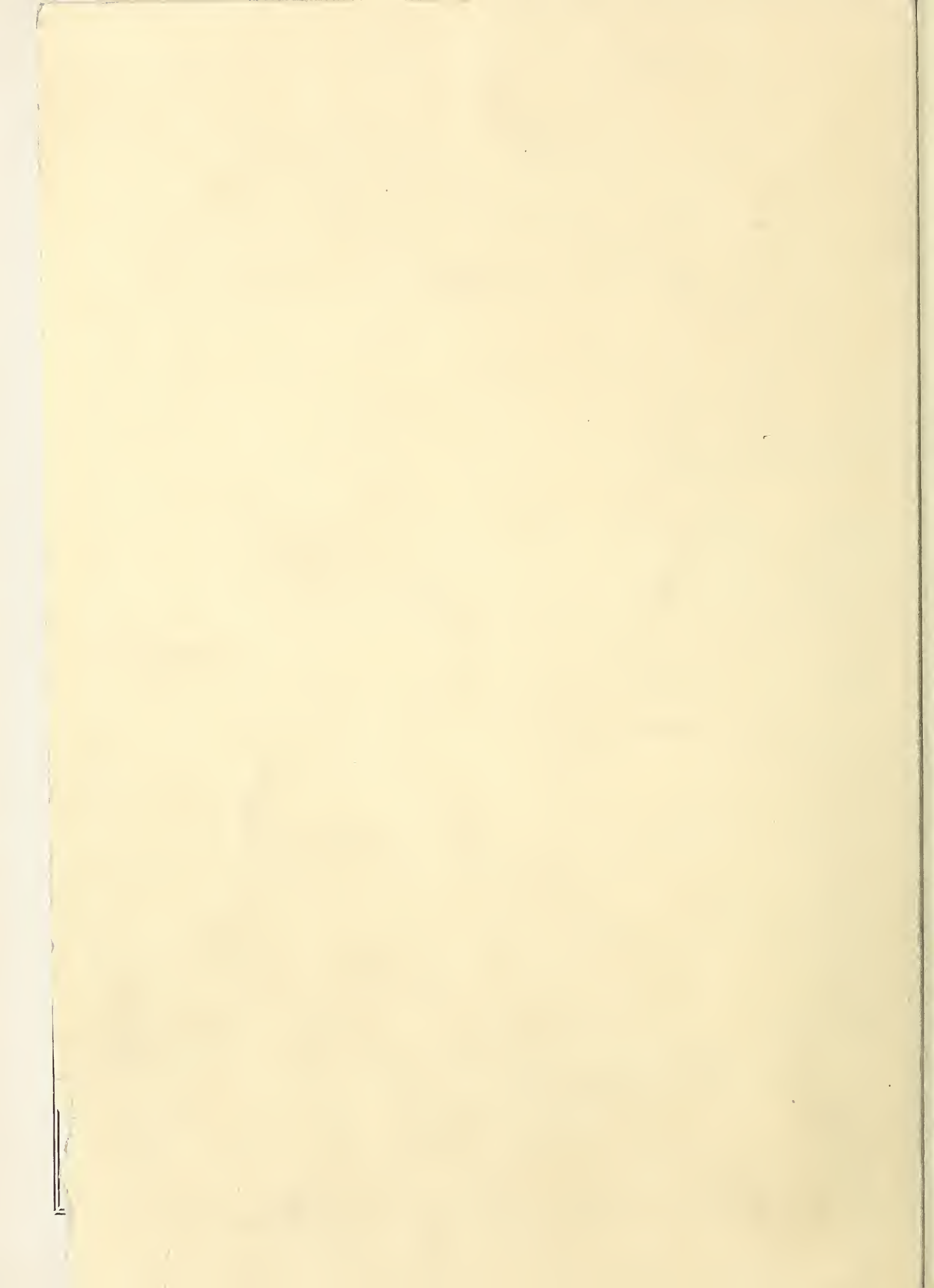


Figure 3—An "Appco Shipsafe" to Hold Six Dozen Apples

The Appco standard dozen apple box will be made to any size you desire, from 2-inch to 5-inch, or even larger. 2¾, 3, 3½, 4 and 4½ are the popular sizes. Any fractional size will be made. A long apple can be packed "cheek down" in a box that fits the diameter by using the diagonal pack. The "cheek down" packing is perfectly safe in the Appco standard dozen box.—Bulletin American Paper Products Company, St. Louis, Missouri.

Editor Better Fruit:

I enclose \$1.00 for renewal of subscription to "Better Fruit." Let me take this opportunity of saying that I think "Better Fruit" is a wonderful dollar's worth, and reflects the greatest possible credit on those who produce it. Yours faithfully, Basil R. Coysh, Brooklyn, Nova Scotia, Canada.



You Take No Chances When You Buy
Hood River Union Pack

A System of Inspection Unequaled in the West

Established 1911 Capital, \$50,000

HOOD RIVER APPLE GROWERS' UNION
HOOD RIVER, OREGON

WILMENG, Manager

Formerly of A. G. Co., Milwaukee, Wisconsin

Correspondence relating to the apple for the coming season respectfully solicited

Orders are now being booked
 for the 1912 crop

Spitzenbergs, Yellow Newtowns,
 Ortleys, Jonathans and
 Other Varieties
Famous for Flavor

We Are the Originators of the Famous
Hood River Union Pack

The Old World's Greatest Fruit Market Center

UNDER date of June 8, 1912, Ridley, Houlding & Co., fruit brokers and commission merchants, Covent Garden, London, wrote the editor of "Better Fruit" as follows:

"It is with much pleasure that we respond to your request for a short article relative to the marketing conditions for fruit in our city, and as our house deals with the enormous quantities of fruit which pass through our hands, by private treaty instead of by the hitherto prevailing method of selling by auction, we think our remarks may be of more than usual interest to the majority of your readers who are interested in the shipping of fruit to the London market. In reference to box stock, the method of selling by private treaty is undoubtedly the best, and the man who puts up a good pack will quickly earn for himself a reputation that will result in top values being realized for subsequent consignments so long as the quality of the pack is kept up to the standard right through. Now this is important, as it is a mistake to let a consignment of slightly inferior pack come through under the brand of the high quality pack; it only shakes the confidence of the buyers in the brand, and in consequence prices generally suffer in consignments that follow on, even if they revert to the previous high quality grade and pack. This took place in several instances last year and the shippers' pockets were the sufferers through it. Our firm is one of the largest handlers of apples in Covent Garden; we have very capacious warehouses and salesrooms, where the buyers cannot only inspect samples but the bulk at the same time, and the large business which we have built up is a compliment to ourselves as to the satisfaction we have given to the shippers in the past, and who are every season increasing their consignments to our house, having full confidence that their shipments, by having personal attention paid to them, are sold to the best advantage on the ruling state of the market. We have made it

a rule for several years past to specialize in the apple business and we find it in the interests of the shippers to do so, and we intend to continue to act as an 'apple firm for apple shippers.'

"Good fruit on the London market always sells well, but London does not require too many of the three and a half tier boxes. Four tiers and four and a half tiers are the best selling sizes. Last season London did very well with the four and a half tiers in comparison with other markets, and from November onward the smaller grade realizes very often as much as the four tiers, and in some cases more. It is a very handy size for the retailers to sell at per pound—they weigh out better than the larger grade—and is a useful article, at a reasonable price, for the community. This, of course, refers to California apples. Hood River, Rogue River, Wenatchee and Yakima Valley apples are favorite apples here, and invariably fetch good prices; and as we understand the Western States have, on the whole, a very good crop we should see some strong consignments being made to this city during the coming season. The colored varieties sell remarkably well after Christmas, and shippers should bear this in mind when making their arrangements for storing, so as to insure our market being regularly supplied. Judicious consigning on their part, together with careful judgment in selling, inevitably result in very fair prices being realized, and the latter is what the shippers aim at.

"London is a splendid distributing center; besides consuming large quantities of apples itself the fruit buyers of the midland, western and southern counties attend the London market, and also numerous buyers from the continent. This is a fact that should not be lost sight of, as it amounts to this, that about half of England's fruit buyers attend the London sales. Prices are more even and regular and not so spasmodic as those that rule on other markets, and there is usually a good

My Big, FREE Book Shows How To Get Bigger Fruit And Vegetable Profits

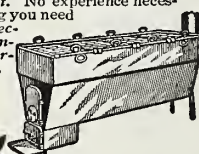
It fully explains how to make big profits from your entire fruit and vegetable crops with my *Stahl Portable Canning Outfit*. There is an ever increasing demand for good, home-made canned fruits and vegetables—right in your own locality. Why not have this big profit, not be derived from any other source?

Stahl's Canning Outfits

"Turn Waste Into Gold"

Each one a complete home canning factory, varying only in capacity. Costs but little to buy—big money-maker from the start. Anyone can run a *Stahl Portable Canning Outfit*. No experience necessary. I supply everything you need including *My Special Directions* which contains formulas for canning the different fruits and vegetables. Write for my big free Canning Book today.

F. S. STAHL,
Box 204, Quincy, Ill.



PORTLAND WHOLESALE NURSERY COMPANY

Rooms 1 and 2 Lambert-Sargeant Building, corner East Alder Street and Grand Avenue
PORTLAND, OREGON

demand for all apples from September up to the following June. Our Mr. Ridley, in his travels through the apple producing centers in the states, was impressed by the desire on the part of most shippers to put up a pack that would not only give satisfaction to the buyer but give confidence in the fruit of that particular district. One cannot put up too good a pack for the London market; a good article will always fetch its money here, and this is an incentive to pack well and to keep up the reputation for a good pack. At present it looks as if the later varieties of the English apples will turn out a short crop; this naturally will be in favor of shipments from the states to the London market, and we are looking forward to some good prices ruling during the coming season; and we recommend the shippers to keep our market fairly well supplied, and not starve it with supplies, with the idea of forcing up prices and then follow on with heavy shipments. This is only riding for a fall, as the abnormal prices cannot be sustained for the heavier shipments. This was experienced last December and it took the trade some time to recover. We hope these few remarks will be of service to those chiefly concerned in our market, and we trust the coming season will turn out to be a very successful one to all concerned."

Editor Better Fruit:

Enclosed please find \$1.00 for renewal of my subscription to "Better Fruit," which I consider the best horticultural paper published. Very truly yours, George H. Johnson, Emmett, Idaho.

Editor Better Fruit:

Enclosed find check for renewal. Book is A No. 1 and read with great interest and information. Yours truly, George Romney, Jr., Smithfield, Utah.

Wenatchee Valley Fruit Growers' Association

WENATCHEE, WASHINGTON

GROWERS AND DISTRIBUTORS

Control for the Season of 1912 over 1,500 Cars of the Finest Apples produced in the Northwest

VARIETIES: Winesap, Arkansas Black, Jonathan, Rome Beauty, Spitzenberg, Winter Banana, Yellow Newtown, Delicious, Missouri Pippin, Black Ben, Gano, Ben Davis.

"Quality and Pack Guaranteed"

Dealers everywhere get in touch with us

STANDARD LIME-SULPHUR HYDROMETER, PRICE \$1.00 BY MAIL

Complete with Test Jar and Instructions.



Apply for Agency

CARBONDALE INSTRUMENT CO., CARBONDALE, PA.

BLUE RIBBON and RED RIBBON

brands of YAKIMA VALLEY apples are standard from Coast to Coast and in foreign countries.

They are an absolute guarantee as to quality, and quality regulates the price.

If you desire the best fruit and fair treatment, we seek your patronage.

The oldest co-operative organization in Yakima Valley, and our experience is the result of ten years of steady growth. Carload shipments of peaches, pears, prunes, plums and apples our specialty.

If interested, would be pleased to open up correspondence with you.

E. E. Samson, Manager

YAKIMA COUNTY HORTICULTURAL UNION
North Yakima, Washington

Cold Storage and Apple Industry From Dealers' Standpoint

Emory C. Cook, Baltimore, at International Apple Shippers' Association Convention, Detroit

IN building this organization into one possessing the high usefulness hoped for by its friends its functions and its policies should be framed so as to take into account several cardinal points and to make them fundamental, otherwise the mainspring of the organization would be selfishness and the defeat of its objects would become certain. First, it should promote and foster apple production, and

to this end should insist on the establishment of reasonable grades and remunerative prices to the grower. Second, it should be ever alert to increase consumption, and to accomplish this it must cultivate the good will of the consumer, not only by supplying him with a fair and honest grade but in guarding him against unfair and unwarranted prices. The public appetite must ever be kept keen, and neither allowed to be over-fed by unintelligent marketing nor under-fed by avaricious speculation.

In these days of increasing productiveness it is both the function and the duty of this organization to promote unceasingly the apple eating habit, and any question whatever which may be relevant to this idea at once becomes a proper subject for discussion by this convention. Contrary to the ideas of some, this is not an organization whose designs are to arbitrarily fix prices, either to the injury of the grower or the consumer, in order to reap an unwarranted profit to the dealer; it is an organization whose design is, as it properly should be, educational, lending its usefulness to both the grower and to the consumer. Geographically we cover the principal producing and marketing marts of the world; commercially let us be as broad as our territory is wide, our policy standing for broadness of scope and fairness of methods, as we as middlemen stand, not as a menace but as a means valuable to all interests. Let us seek to eradicate that which lowers the ethics of our business, and, as leaders in our trade, be builders and promoters in all things for the betterment of the conditions surrounding it.

As we move forward let aggressive progressiveness be our watchword that achievement may be inscribed upon our banner, and to this end let us openly discuss such subjects as present themselves to us as a proper means to accomplish our high objects. In order to open the discussion there has been assigned to me the following subject:

"Cold Storage and Its Relation to the Apple Industry," to be discussed from the standpoint of the dealer. You are presented a subject which, in my judgment, has become the very basis of all operations in apples, and the one that has grown to be fundamental in the fixing of prices as well as in the preservation of the fruit. Next after extent and quality of the crop grown the means of preserving it becomes the

40-Acre Commercial Bearing Orchard

AN EXCEPTIONAL BARGAIN

40-acre prune and apple orchard in the Umpqua Valley, Oregon. \$10,000 crop guaranteed this year. This is one of the finest orchards in the Northwest—river bottom land—30 acres in prunes and 10 acres in commercial apples, 14 years of age—175 English walnut trees 2 years old from setting. Price \$40,000; terms. Think it over—25 per cent on your investment guaranteed the first year.

HIMES & OLIVER, Roseburg, Oregon

In Rogue River District, Oregon

110 acres, 3 miles from station; young home orchard and 70 acres under cultivation. \$85.00 per acre.

30 acres, 2 miles from station; 20 in 3-year apples and 10 in 3-year-old pears; sub-irrigated. \$300.00 per acre.

80 acres, easily cleared; fine pear land; 5½ miles from station. \$25.00 per acre. And other bargains. E. P. CHANDLER, Rogue River, Jackson County, Oregon.

Hood River Grown Nursery Stock for Season 1911-12

Standard Varieties

Prices Right and Stock First Class

C. D. THOMPSON, Hood River, Oregon

Finks Brokerage Company

AUSTIN, TEXAS

We are brokers exclusively, sell to jobbing trade throughout Central and Southern Texas. Our traveling men get results. Let us sell your apples.

Correspondence solicited

FINKS BROKERAGE COMPANY

Bearing Apple Orchard For Sale

40 acres, young trees, best standard varieties; good crop this year. Abundant water and good house sites. Located in the finest apple section of Western North Carolina, where water, climate and scenery are unsurpassed. Fruit Growers' Selling Association just organized. Cold storage planned. Only reason for selling: the manager has more orchard than he can look after. Price \$300 per acre. Terms.

BOLLING HALL, Waynesville, N. C.

ITALIAN PRUNE TREES

We have a few thousand in surplus. RUSH IN ORDERS. We have the only prunes. Save one year. HURRY UP! Don't be disappointed. We have a full line of all other stocks.

CARLTON NURSERY CO.

Carlton, Oregon

FOR SALE

One of the best apple orchards in the famous Willamette Valley. Twenty acres; seventeen acres of fifteen-year-old trees. Fine air and water drainage. One-eighth mile from shipping point. Beautiful building site. Good crop now on trees. \$400.00 per acre if taken before September 1. Address "Willamette," care of "Better Fruit."

HAVE YOU

CONQUERED

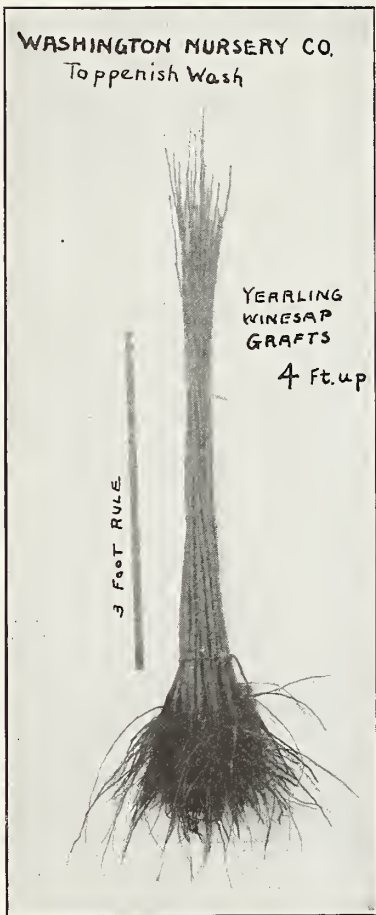
SAN JOSE SCALE ?

We guarantee it can be done with "Scalecide" for less money, with less effort, and more effectively than with Lime-Sulfur or anything else. "Scalecide" may be mixed anywhere, in any kind of a tank or barrel that is clean. "Scalecide" does not corrode the pumps or clog the nozzle; consequently the pumps work very much easier, with less labor, wear and tear. "Scalecide" will not injure the most delicate skin, and may even be placed in the eyes without the slightest inconvenience or injury. "Scalecide" is used successfully by fruit growers in the United States, South Africa, Porto Rico, Cuba, and Australia, because experience has taught them that the greatest perfection in fruit and foliage is produced by the continued use of "Scalecide," and with less labor and less expense. Let us prove these statements. A postal request to Dept. "D" will bring you by return mail, free, our book, "Modern Methods of Harvesting, Grading and Packing Apples," and new station in booklet, "Scalecide—the Tree-Saver." If your dealer cannot supply "Scalecide" we will deliver it to any railroad station in the United States east of the Mississippi and north of the Ohio rivers on receipt of price: 50-gal. bbls., \$25.00; 30-gal. States, \$30 bbls., \$16.00; 10-gal. cans, \$6.75; 5-gal. cans, \$3.75. Address: B. G. Pratt Co., 50 Church Street, New York City.

50-GALLON
BARREL

delivered
to any
railroad
station in
the United
States, \$30

Washington Nursery News, July, 1912



Italian Prunes, Pears, Apples, Peaches, Apricots

And all other standard kinds and varieties of staple fruits, berries, grapes, etc., now coming in in our nursery at a pace that means fine grades and splendid big matured stock.

This year we have the biggest and best force of salesmen ever, and have booked the biggest and best lot of orders to date that we've ever had on our books.

There's only one thing that makes this possible: Quality and Service.

We've established a standard for nursery stock that's made the purchasers mighty exacting.

"As good as Washington Nursery trees," has become a slogan with many a salesman who is trying to get a hearing with a customer who demands quality.

We've made our nursery what it is by painstaking attention to detail. Each of the three departments—Growing, Selling, and Shipping—is in the hands of an individual member of the Company, who knows what he is doing, and whose business it is to look out first for the interests of the customer, whose patronage makes our big business possible.

This season our plant and our stock is in the pink of condition. Our big stock of apple, pear, peach, prune, plum, etc., all propagated on our own clean home-grown seedlings, is growing to perfection, and if you want healthy, well matured trees, free from insect pest or disease, drop us a line and we'll have our salesman call on you.

Mr. Nurseryman

Write and tell us how many of our fine, clean, Yakima Valley grown apple seedlings you want. 120 acres. Best ever.

Washington Nursery Co.
TOPPENISH, WASHINGTON

Some Salesmen Needed in Good Territories
Write for Our Proposition

question of most importance; this is accomplished by means of chemical cold storage. Modern cold storage, in my judgment, is also the one great influence which induces speculation; indeed, is the one great branch of our business in which the producer, the consumer and the dealer are most profoundly interested, and without which profitable fruit growing and operations on a large scale would be impossible.

The subject is too broad in its scope to be adequately discussed within the limits of a single article, especially when handled by one who is by no means an expert. However, I shall attempt to approach the subject in the order of its importance as it appeals to me, and first discuss it from the standpoint of the consumer, on whom at last the burden (if burden there be) must fall, or to whom accrues a large share of the benefits if the business is safely and wisely conducted. I do not hesitate to name this as a paramount interest involved, although it is sometimes a forgotten element, but it is still that force which gives safety and stability to our business, and without the friendly support of which no enterprise may succeed. According to the latest figures available there are in the United States eleven hundred cold storage plants, warehousing annually food products to the value of hundreds of millions of dollars, with capital invested in it, and industries wholly or in part dependent on mechanical refrigeration to the extent of more than a billion of dollars. Of apples alone there are stored more than four millions of barrels. Gigantic as these figures are, is it any wonder that they have attracted the attention of governors, senators, congressmen, state legislators, food experts, political economists, magazine writers, muck rakers and men of all sorts of insane ideas, and at last mine? None have entirely solved its problems, nor do I expect to, though I shall attempt to call your attention to some of its uses and to some of its abuses as they disclose themselves to me, and if it may awaken in your minds that which will make for better conditions I shall be profoundly thankful.

What are the relations of cold storage to the consuming public? Are they a menace or are they a benefit to the consumer? Recent developments have raised a hue and cry against them, which indicates that either the public lacks information or that cold storage has become a public menace that calls for legislation looking to lawful public control. Let us for a moment consider the benefits the consumer derives from cold storage as applied to the fruit industry, for no matter what may be urged against them by reason of antiquated eggs and mummified poultry, whether true or false, this is not a subject for discussion in a convention of apple men, but is within the province of magazine writers, ambitious legislators and other wise men, most of whom wouldn't know a modern cold storage plant from a second class livery

Cut This Out for Future Reference

An Experienced Landscape Architect Added to our Organization

Have you a spacious yard surrounding your home that you would like to have made more attractive?

Our Landscape Architect will draw for you a

Suitable and Artistic Planting Plan Free

showing the best kinds of Shrubs, Trees, Vines, Roses, etc., to plant on your grounds and HOW TO ARRANGE THEM so as to make the results pleasing to the eye and harmonious in color design.

You can add to the value and selling price of your property by making it more attractive.

By making it more pleasant and attractive you will enjoy your home more yourself. It need not cost you much to improve your property along simple but artistic lines. Knowing how to best arrange the shrubbery is the secret. Let us help you. Start now, so you will have plenty of time to mature your plans for next fall or spring planting.

Simply send us a rough sketch of your property—showing the size of your plot of ground; size and location of your house; distance to the lane or street, etc. We will do the rest. Address

Oregon Nursery Company

The Big 1200-Acre Nursery

ORENCO, OREGON

Salesmen Wanted

Ship Your Strawberries Cherries and Vegetables

To Butte, Montana

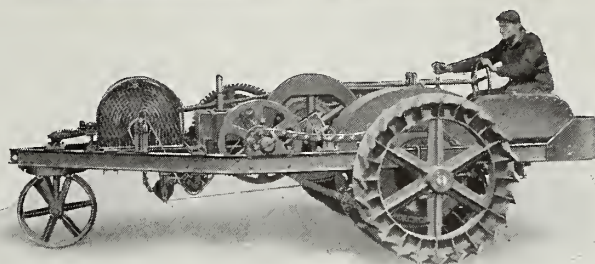
The Best Market in the West. Write for quotations. Send for our shippers' stamp. Prompt returns.

Butte Potato and Produce Co.
BUTTE, MONTANA

A. J. KNEIVEL
President and Manager
Sixteen years' experience on the Butte market.

stable. No sound argument can be raised against our specialty on hygienic grounds; we shall, therefore, need only to discuss it from an economic standpoint. As a properly conducted enterprise there can be no disputing the fact that cold storage serves a great public good to the consumer by extending very largely the period in which he may be supplied with fresh fruits, delivered in its most wholesome condition—just as nature produced it from the trees. Instead of enjoying the fruit for a short period only it is served to him nearly the whole year round. It would be difficult, indeed, to estimate the health and enjoyment this affords. By the prevention of waste it also augments the extent of the crop and increases the food supply to the extent thus made available, but which would otherwise go to waste. This is a very important item to the consumer which should not be lost sight of. These are the chief benefits that the consumer derives, and against these may be computed the legitimate cost. What is this cost? Under a properly conducted enterprise the entire cost to the consumer is not a large item. In fact, so far as the matter of storage is concerned, the cost is nearly, if not quite, offset by the waste that is saved to the food supply, thus holding prices to a lower level than would be the case if a large per cent of the crop should go to waste, as it otherwise would. Consequently if the consumer has reasonable grounds for complaint it lies in another direction, and is quite apart from the principle of cold storage, and to which I shall refer later.

Second, has its value to the purchaser been equally as well established? An affirmative answer to this proposition would raise no dissenting voice from any source, and needs no argument to sustain it. Without cold storage to preserve his crop the orchardist would be like a ship without a rudder, and would face ruin and disaster. Before cold storage, with only a small percentage of the present production, he had only two alternatives—to sell his fruit at gathering season in glutted markets or to hold it with all the attendant risks of deterioration and waste until it could be disposed of to better advantage. From a crop that demanded the closest attention of the grower throughout a long winter, with its attendant risks of frost and decay, with fluctuating markets and uncertain values, it has become his quickest crop to realize on as well as one of the most profitable. By reason of the utility of cold storage he always has at hand a ready market for the full value of his fruit and a responsible dealer to sell it to. If he meets with losses it is only when he assumes the role of a speculator or attempts to use a "piker" to force an extravagant and unwarranted price for his product. From the producer's standpoint, therefore, the subject may be dismissed, for daring would be the man who would raise his voice against it.



It Meets Your Special Needs

The Johnson Tractor is built for orchard work. Every feature has been worked out, and a rational substitute for horses is the result. The Johnson Tractor stands low to the ground, thus working close up with low headed trees. Its wheels are of a special design, and enable a maximum pulling effort to be exerted on a soft dust mulch, without packing the soil. From every standpoint, from first cost to economy, the Johnson Tractor has no equal for orchard work.

We feel that you are principally interested in what it will do for you. We will put a Johnson Tractor in your orchard without one cent as a deposit or otherwise, and keep it at work until you are fully satisfied of its ability to do your work better than horses. This offer has no strings. All we want is a square deal. If you work ten or more horses, write us today.

Joshua Hendy Iron Works

69 Fremont Street

SAN FRANCISCO, CALIFORNIA

THE ORIGINAL MOUNT GILEAD

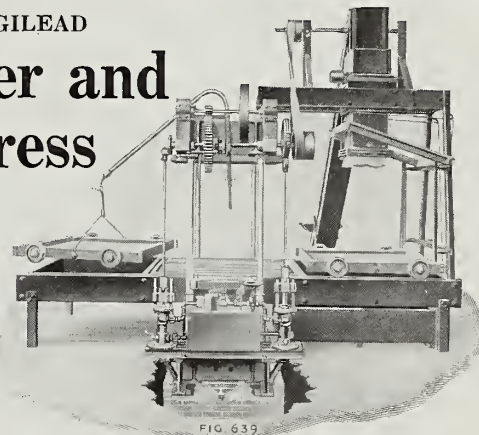
Hydraulic Cider and Grape Juice Press

produces more juice from less fruit than any other and is a

Big Money Maker

Sizes, 10 to 400 barrels daily.
Presses for all purposes, also apple-butter cookers and pasteurizers.

If interested, write for catalog.



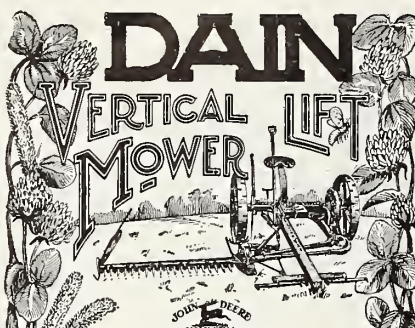
The Hydraulic Press Mfg. Co., 60 Lincoln Avenue
Mount Gilead, Ohio



Real Estate

Twenty-five years' residence in Hood River. Write for information regarding the Hood River Valley. Literature sent upon request. Address all communications to

W. J. BAKER & CO.
HOOD RIVER, OREGON



DAIN VERTICAL LIFT MOWER

JOHN DEERE
MACHINE CO.

Is a Clean Cutter

Its compensating gears and cutter bar realigning device are successful examples of the wonderful inventive genius of Mr. Joseph Dain. The gears are so mounted in relation to each other that perfect balance and true mesh are permanently insured and the crank shaft is relieved of all end thrust, preventing lost motion, reducing draft and multiplying cutting power. That is why the Dain Mower runs lightly and cuts where others fail.

It is the only mower you can realign, yourself, right in the field with your wrench. This practical adjustment for maintaining the cutter bar in line with the pitman, means added efficiency and years of extra service.

A Real Vertical Lift

Notice the spade handle on the lever. Easy to grasp, no twisting. One movement of one lever raises the bar, knife throws in and out of gear automatically as bar is raised and lowered. The large-coil, flexible spring floats the cutter bar, does practically all the work in lifting with the foot at corners and helps in raising the bar vertically.

Consult the nearest John Deere dealer: learn all about this greatest of all Mowers, and about the entire line of Dain Hay Tools, Loaders, Side Delivery Rakes, Stackers, Sweep Rakes, Presses; every one the best of its kind.

Dain makes the best hay tools. They have been specializing on them for over a quarter of a century.

SOLD BY
THE JOHN DEERE PLOW CO.
of Portland, Oregon

"Get Quality and Service, John Deere Dealers Give Both"

**Ginocchio-Jones
Fruit Co.**

APPLES

KANSAS CITY, MISSOURI

For 26 Years

Joseph Flaherty

Twenty-first Street
PITTSBURG

Box Apples and Pears

Having thus discussed the matter from the standpoint of the consumer and the producer, and thus far having disclosed nothing for reasonable grounds of complaint, most seriously and thoughtfully do I approach the main subject under discussion by this convention. What is the relation of cold storage to the dealer in apples? I say dealer, for in my judgment there is a very important difference between the words speculator and dealer, and the sooner we get away from the idea of speculation the sooner we will put our trade on a sound business basis. The class of speculator I refer to is the one who discounts the future without regard to his actual needs; the legitimate dealer buys only for his commercial requirements, buys nothing beyond his ability to pay for without asking unreasonable advances and with a definite idea as to where he can market his goods; he uses careful judgment in buying, with due consideration given to both crop and market conditions. He is the responsible middle man whom the grower, the storage and the consumer could not dispense with, for however much he may be decried, without his intelligent co-operation, without his untiring efforts in the searching out of markets and his unceasing vigilance in supplying and creating demands for his product the producer could not profitably market his crop. Until pneumatic tubes connect the farms and the orchards with kitchens of the consumer the honest, intelligent middle man must continue to be one of the most valuable links in the chain of commerce, and anything that affects him disastrously must be a menace to the whole country, and anything that operates to put in his place the "piker" or the adventurer is a crime.

The speculator who merely buys a product in the hope of an advance, who has no established trade and no legitimate use for the goods, is merely a parasite, and his functions are those of the gambler and his operations partake of the methods of the bucket shop. He adds not one iota to productiveness, nor a tittle to consumption; he creates no demand, but discourages it; he is a leech sucking the vitality of both the producer and the consumer and giving no value in return. He is the individual who takes extraordinary chances on future markets and agrees to pay extravagant prices. In the end he is also the individual who owes the grower, the banker and the storage house and weakens the buying capacity of the legitimate dealer. He is enabled to do so wholly by reason of the encouragement given him by a certain class of storage houses and their ally—the too liberal bank. It is high time that a sharp distinction be drawn between the speculator and the dealer. The dry goods merchant who anticipates the wants of his trade and has an outlet for the goods, and who buys to his full capacity, is merely following legitimate commercial lines, but when the druggist, the shoemaker and the

Thirty-Four Years' Experience

Growing nursery stock True-to-Name, which won our reputation. We have a complete line of nursery stock from which to choose. Our customers are guaranteed entire satisfaction. As usual we will have a splendid lot of

Apple, Pear, Cherry Peach, Plum and Prune

Also a general assortment of Shade and Ornamental Stock. We will be pleased to figure with prospective planters of commercial pear orchards in Bartlett and Anjou. Write for new descriptive catalog. A postal brings it.

Milton Nursery Company

A. MILLER & SONS
Incorporators
MILTON, OREGON

Get Catalog and Price List

420 acres devoted to nursery purposes

THE WOODBURN NURSERIES

Established 1863 by J. H. Settlementier

GROWER OF CHOICE
Nursery Stock
F. W. SETTLEMIER, Woodburn, Or.

Northern Grown Trees Do Not Winterkill

SPECIAL PRICES FOR
FALL DELIVERY

The Northern Nurseries

Box 418
Chewelah, Washington
MORE SALESMEN WANTED

Famous Hood River Apples

Spitzenbergs, Newtowns, Arkansas Blacks, Jonathans, Ortleys, Baldwins, Winesaps, R. C. Pippins, Ben Davis, M. B. Twigs

Look Good, Taste Better, Sell Best
Grade and Pack Guaranteed

Apple Growers' Union
Hood River, Oregon

EVERYBODY SHOULD KNOW ABOUT ALL MOTOR CARS

also Gasoline or Internal combustion Engines since this is unquestionably the Power of the Hour which is certain to become universally adopted for every purpose on the farm as well as entire Commercial world. You need this A B C book and will find it better than any college course, because: We have been identified with the Motoring business since its inception in America, and through our international publishing business have for years commanded the services of the world's master minds devoted to this important subject. Our latest book, "The A B C of Motoring" is positively a Free Thought publication—free from any and all factory influences, and gets right down to the bare facts of the whys and wherefores, written in a non-technical, readable and comprehensive language that all can understand, besides being profusely illustrated with over two hundred special engravings.

Even expert operators, after exhausting the factory instructions and printed literature, find this work invaluable and the following voluntary expressions of gratitude are only some of the hundreds we will gladly furnish from our files on request.
H. P. LASHER, live farmer, Cushing, Ia., writes: "Your A B C book is full of information I had not been able to find elsewhere in any book of instructions."

J. Q. DAVIS, Nevada, Texas, writes: "My car had been out of commission for some time but upon receipt of your splendid A B C book, I immediately went to the garage and fixed it to run better than ever. I am indeed pleased with your non-technical writings and splendid illustrations, and enclose herewith remittance for five years' subscription to your magazine 'Motor Car'."

The price of this book is 75c per copy and this Coupon will bring you one for examination FREE



MOTOR CAR PUB. CO.,
KANSAS CITY, MO.

Dear Sirs: B.F.P.C.
Kindly send me your latest book on the "A B C of Motoring," subject to my approval.

Yours very truly,

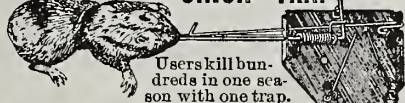
Name
Address

POSITION WANTED

By an educated horticulturist of energy and ability, with a lifetime experience in the orchard. L. B. ZELL, 509 N. 3, Walla Walla, Wash.

Rid Your Land of Gophers

RATS, MOLES, SQUIRRELS. A 10-year old boy can do it with this "CINCH" TRAP



Users kill hundreds in one season with one trap.
No gun, no poison, no bait. Absolutely safe. Made entirely of steel. Guaranteed. Your money back if it's not the best trap you ever saw or heard of.
TRIAL TRAP SENT POST PAID TO YOU FOR \$1.00 BY
EUREKA SALES CO. PORTLAND, ORE.
(Mfd. by Wyman Emerson Co., Gaston, Ore.)

butcher, anticipating war prices, buy dry goods, only putting up a small margin to hold them, few banks would encourage them in such transactions by loaning their resources for such purposes, and yet is not this very thing done in the fruit business, and a more perishable commodity taken for their security, behind which is very little, if any, responsibility? Each and every one of you have in mind many such instances. The tendency the last few years among certain storages, by the aid of some banks, has been to place a premium on irresponsibility and to place the business on a speculative basis, which must in the end, if adhered to, react disastrously upon both the consumer and the producer by crowding out of business the very class of middlemen on whom the stability of the business so largely depends and replacing them by such speculative methods as are condemned. It is high time that a halt be called and our business be placed on a legitimate basis. The present tendency of encouraging over-speculation by cut rates of storage and unreasonable advances means disaster, bankruptcy and the ruin of an important industry.

The efforts of this association should be to place the transactions of its members on a firm business basis and to get away from the idea of speculation. We should discourage any attempt made to designate the trade as speculators. The nature of the commodity we handle requires that someone shall hold the goods in order that a somewhat even distribution may be had to the consumer. Experience has shown that this can be brought about only through such middlemen that by long experience have specialized in these lines; men who have studied and who know the wants of the trade and how best to serve it; men who stand between the producer and the consumer, and who for a fair compensation will faithfully serve both. Such men fill an important post and are absolutely indispensable to the grower if there is to be a steady and regular distribution of his products. The legitimate dealer in apples keeps his finger on the public pulse, studies the situation carefully with a view to stimulate consumption, buys only for his legitimate needs and anticipates his wants conservatively; he selects his fruit with a view to please his trade, thus stimulating and keeping alive a public demand, pays a fair price for what he buys and meets his obligations. The interest of the grower is safe in his hands. Under his influence all markets are kept under a watchful eye, he knows the particular variety that each market will pay the highest price for, and by long and extensive experience he has learned how best to distribute, and no corner of the world has escaped his attention or is too distant to discourage him from pushing the grower's product. This is the function of the legitimate dealer, and his efforts should be fostered by the grower and not antagonized by any friend of the indus-



This Book Sent Free

"Spraying, a Profitable Investment," will help you grow better and more profitable crops. It is a book of 120 pages, containing over 50 illustrations and telling how, why and when to spray. It was compiled from data, gathered by experts, and is being used by many of the prominent State Agricultural Colleges.

Write for a copy today
It is mailed free for the asking



C.F. BLEY FRUIT TREE SPECIALIST

HAMBURG, NEW YORK

SHAPING YOUNG FRUIT TREES A SPECIALTY

The usefulness and the permanency of a fruit tree depend in a large measure on its early training—a strong framework, with weak crochets eliminated. We are experts in this line of work and will prepare your young trees for the work they are to perform, in the most approved manner. Will go to any orchard section to execute large orders. Correspondence solicited. References: The New York State College of Agriculture; best fruit growers in Western New York. C. F. BLEY, holder Cornell Certificate. Address, Hamburg, N. Y.

You Can Get Maximum Fruit Crops

If you keep a few bees to pollinate your blossoms, and keep them right.

First Lessons in Bee-Keeping tells how to do this. Price 50c by mail.

The American Bee Journal is a monthly magazine devoted to the interests of bees and their products. Price \$1.00 a year. Sample copy free.

We club the book and magazine together, both for only \$1.00. Write at once to

AMERICAN BEE JOURNAL
Hamilton, Illinois

Minnesota Fruit Co.

Wholesale Fruits and
Commission

Apples Our Specialty

Get in touch with us

DULUTH, MINNESOTA
Head of the Great Lakes

THIS ORCHARD LADDER

Doubly Strengthened

here with galvanized steel braces and pivoted on a steel rod. This assures strong and equal support.

Is the Strongest and Most Durable Ladder Made

Every orchardist should have the "Star" orchard ladder, because it's the best and cheapest in the long run. Made so well that it will withstand the roughest usage and give a feeling of perfect safety to the user.

Every Step Secured by a Bolt (no nails)

Every step is set in a groove and secured by a specially made galvanized steel bolt. These bolts are so arranged that should any shrinkage in the ladder occur it can be easily taken up. This assures the ladder being kept in perfect condition.

Notice the Braces

The hardest strain comes on the first step. Notice how securely braced the "Star" is. Notice the double bracing on the first step particularly. You'd have to deliberately break these steps to put this ladder out of commission.

The "Star" Orchard Ladder

Once you use this ladder you'll have no other. It is made from best quality clear spruce. For orchard use and durability it can't be equaled. Sizes, 6 to 20 feet.

Get it from Your Dealer or Direct from Factory

UNION BLIND AND LADDER CO., Inc.

3635 Peralta Street, OAKLAND, CALIFORNIA

try. Irresponsible speculation conforms to no ethics and serves no good purpose, but brings discredit on the entire trade and operates against the interests which foster and uphold it. If all the money lost by irresponsible speculation and by the men who have no legitimate place in the commercial world could be computed it would be found to furnish so heavy a tax on the producer and the banker as to discourage it. Let us eliminate, so far as we can, speculation and substitute sanity and soundness, and strive rather for quality than quantity of effort.

But to get back to the main subject of this discussion. There are two classes of warehousemen, the methods of whom are quite different. One is a large body of conservative men who have done a great service to the industry by elevating the business to a science, and who cater to the substantial interests of the trade. The other is a smaller but active element whose methods are those of the bucket shop, and to whose influence is due the tendency to speculation and to lower the level of the trade to a speculative basis. It is to this latter class that I wish to pay my special respects by discussing their methods from the standpoint of the dealer and showing wherein lies good ground for complaint by the consumer. I refer to a class that I have in effect already designated as the "cold storage bucket shop." In order to sell their space they make such representations about future prices as to influence the grower to hold his fruit, more frequently to his injury than otherwise, and sometimes to the practical loss of his crop; in doing this they injure the grower and the consumer alike, and for the sake of the storage they receive are willing to mix up the whole situation and to prevent the necessary volume of consumption that must be maintained to successfully market a normal crop. They are largely responsible for the losses that growers sustain from irresponsible parties who every year bob up like a mushroom and flourish for a season at the expense of the industry. Their annual cry is store, store, store, and thus they are responsible for losses that growers sustain by over-holding their market—to see a free movement of fruit from the orchard to the markets, out of their own immediate territory, is like the waving of a red flag before an angry bull. In order to offset this their recourse is to prevent sales by exciting the growers and getting them to hold the fruit at such exorbitant prices that dealers cannot buy in order that they may fill their warehouses—all this they do with little regard to the actual conditions as they exist. This is the atmosphere in which the margin gambler and the speculative plunger is known to thrive, and these are the conditions under which he is able to supplant the dealer and become a demoralizing element to the grower and to the consumer and to the trade. I charge this class of warehousemen with the wild scramble that

Reliable Nursery Stock

Having enjoyed a very large business the past season, we wish to announce that we are better prepared than ever for the season of 1912-13.

The number of reports on file from customers as to the fine quality of the stock received tells the tale. They received thrifty, well rooted, non-irrigated trees. They ordered quality and got it. They were well pleased, and they will be even better pleased when their trees reach maturity.

There is such a thing as buying a tree because it is offered cheap. This is an experiment, a waste of money.

Quality and a fair price are the rules of our business.

We offer a flattering opportunity to any live, reliable man to join our selling force, enjoying a good income and obtaining a course in Horticulture, placing him on a professional basis.

SALEM NURSERY COMPANY

416-17 U. S. National Bank Building

SALEM, OREGON

JUDICIOUS SPRAYING IS AN EFFECTIVE FRUIT INSURANCE

P-W-R**LEAD ARSENATE****P-W-R**

SUPPLIED BY WHOLESALE DRUGGISTS AND DEALERS THROUGHOUT THE UNITED STATES

POWERS-WEIGHTMAN-ROSENGARTEN CO.**Manufacturing Chemists**

Founded 1818

NEW YORK**PHILADELPHIA****SAINT LOUIS**

always ensues in the spring to make sales when growers and margin speculators have been excited into holding too large a percentage of the crop, and with every just complaint that the public has against the apple industry. The effect of their bucket shop methods is to early curtail consumption for the benefit of the storages, regardless of how much injury they cause the grower by reason of glutted spring markets, which must always follow a too liberal holding of fruit. In pursuing these methods they are putting a premium on irresponsibility, demoralizing the trade and reducing their rates of storage to a starvation basis, which leads to bankruptcy, and in fact to the demoralization of the whole industry. For warehousemen as a

rule, personally, I have the most generous feeling and regard. However, in the class under discussion, their optimism is always largely exaggerated—usually as big as the capacity of their plants, and remains so as long as they have space to sell. Everything storable looks good to them in the storing season—the size of a dollar gets smaller and smaller and the value of a barrel of apples, whether number ones, twos or tree run, gets larger and larger according as sales of space lag. From offers of reasonable advances and living rates at the start, they increase their loans and lower their rates of storage until one inclined to speculate, but hesitating at the price, begins to feel that he has all to win and nothing to lose, and away goes the price of a commodity to a point that makes no money for anybody, but squeezes the consumer until he cries for relief, with the result that too often spring markets are glutted with fruit which ought to have been marketed in the fall, and the grower and the warehouse and bank holding the bag and pocketing the loss.

The situation would seem to demand that cold storage owners and managers should confine their business to warehousing and let dealers do the buying and marketing. As warehousemen, any well located plant will pay reasonable dividends, but as speculators how many of them do? Instead of warehousemen and dealers being mutually helpful the contrary has become distressingly true. In encouraging growers to speculate by holding out unwarranted prospects of high prices later for his crop by a too liberal advance to speculators and by the promise to growers to market their fruit early consumption is curtailed, a poorer class of fruit is placed in the coolers—all of which is assessed against the consumer—and in this lies his reasonable grounds of complaint. Is this legitimate warehousing or is it frenzied finance? Is it fair to the sane operator, to whom you and the producer look for support? Is it fair to the consumer who pays the cost? There are enough dealers and conservative operators to fill your storages, gentlemen. Let supply and demand, not extraordinary inducements to speculate, govern the price and business will adjust itself along lines fair to all interests, and

everyone will get his dues. Markets will be more steadily supplied throughout the whole season and there will be a healthy movement, beginning in the fall and ending only when the crop is exhausted. Spring gluts will not occur when a reasonable movement of fruit goes to supply the consuming demand in the fall, and when the evaporator and the cider mill have not been robbed in order to fill your space and to furnish collateral for a poorly secured loan. I am far from discouraging a policy of liberal advances to the commercial world, but a too liberal line of advances encourages unwise speculation and unwise speculation causes losses, and losses drive the more responsible class of dealers into other lines of business where the risks

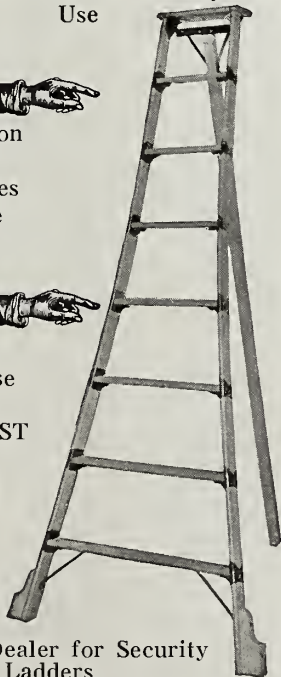
SECURITY LADDERS**"NOT A NAIL IN THEM"**

The Most Economical to Buy and Use

Security Construction is Rigid and Inspires Confidence



Security Patent Step Joint Makes these Ladders STRONGEST Where Others are Weakest



Ask your Dealer for Security Ladders

Light—Strong—Durable—Save Wages

SECURITY LADDER CO., Inc.
 Los Angeles, California


Nursery Stock That Makes Good

You can't afford to take any chances when planting nursery stock.

Insure yourself against future disappointment and losses by planting our clean, vigorous, guaranteed trees and shrubs.

Stock is thoroughly matured, absolutely hardy, and entirely free from disease or pest.

EVERY TREE IS GUARANTEED TO BE TRUE TO NAME.

TOPPENISH NURSERY COMPANY

TOPPENISH, WASHINGTON

In the famous Yakima Valley

Fruit Tree Stocks

FOREIGN AND DOMESTIC
ALL GRADES

Pear Seedlings—French (American-Grown and Imported)
Japan and Kieffer (American-Grown)

Apple Seedlings—American-Grown and Imported, straight
or branched for grafting or budding

Paradise

Doucine

Cherry Stocks—Mazzard and
Mahaleb

Plum Stocks—St. Julian and
Myrobalan

Rose Stocks—Canina, Manetti
and Multiflora

Quince Stocks

We also import large quantities of Ornamental Tree Seedlings,
Shrubs, Roses, Evergreens, Etc.

Submit list for prices, naming amounts, grades, etc.

THE SHENANDOAH NURSERIES

D. S. LAKE, Proprietor

SHENANDOAH, IOWA

are less hazardous, and in the end any weakening of the buying force reacts upon the producer. No less important is the fact that fictitious prices, established by too liberal advances, cheats the consuming public out of what it is entitled to in the fall, deprives it all during the season and causes, and very reasonably so, the demand for legislation to take a hand against speculation in food products. I would say to storages and to banks: "Stop your over-liberal inducements to speculation and you will stop this cry for adverse legislation. Recognize the fact that the legitimate function of a cold storage plant is that of a warehouseman, and not that of a speculator." Too liberal advances place in the storages a poorer class of fruit than should or would be placed there by legitimate dealers. Banks making loans do not usually closely inspect the fruit they are loaning their depositors' money on. If they

did in many cases their loans would be less liberal.

The poor class of fruit our coolers are turning out by reason of this very condition is doing much to dissatisfy the consuming public, which, of course, will finally react upon the grower. This applies more forcibly to the barreled sections of our country than to any other, for the quality of much of the barreled fruit has so deteriorated, under the policy of large advances without inspection, that the trade is showing an immense drift toward boxes; and this of itself should be a strong argument against ill considered loans on doubtful quality. The danger is that a continuation along these lines will lead to legislation of a drastic nature, enacted by men who have no practical knowledge of the storage business, and such legislation is always harmful to the legitimate interests of any business when made to reach those who abuse it. In the earlier days of the business only the very best fruit was considered practical for cold storage purposes, but in these later days, under the encouragement of too liberal advances and careless inspection, anything is considered good enough to waste refrigeration on; little distinction is made between the good and the bad, with the result that operators and those who make the advances are taking extra hazardous chances, and the consumer is made to feel the effect of it in the high prices he is expected to pay for poorer fruit than ought to be handed out to him. Unless more conservative advances are to become the rule of our friends, the banks, the season will not be long in coming when they will be taught such a lesson as will force them to adopt a safer course, and unless this class of storages hold out less inducements for wildcat specu-

STUDY AGRICULTURE AT HOME

THE CAMPBELL CORRESPONDENCE SCHOOL has a course covering thirty subjects and sixty lessons on Intensive or Scientific Farming. Professor Campbell and associates have spent thirty years experimenting and demonstrating that this method brings results. It applies to the land of forty inches of rainfall, to the land under irrigation or the so-called Dry Farming. Wherever it was intelligently used in 1911 that man has elevator receipts to show the value of the system. It insures a crop every year and a bumper crop in favorable years. It means more money in the bank, home comforts and a pleasant life for all on the farm.

The Campbell System

Stands for better farming and better crops. You use less seed, but better tillage. It teaches you how to breed and select seed, how to conserve moisture so that your crop will not be ruined in the hot, dry spell, and how to mature a crop on a small amount of rainfall.

\$208 Net Per Acre


Is what one man did in 1911, using the Campbell System on land that cost \$12.50 per acre. Would you like this man's story as he tells it? Send us a postal, giving your name and address, and we will mail you a sample copy of the Scientific Farmer, a catalog of the Correspondence School, and this man's story. DO IT NOW.

CAMPBELL SOIL CULTURE CO.
LINCOLN, NEBRASKA

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

lation disaster must sooner or later lead to results which will involve dealer, producer and warehouseman.

With the enormous increase in the production which confronts us I believe that now is the opportune time to draw in the lines of advances and to discourage speculation, and give supply and de-



Mills College

Suburbs of Oakland, California.

The only Woman's College on the Pacific Coast. Chartered 1885. Ideal climate. Entrance and graduation requirements equivalent to those of Stanford University and University of California, nearby. Laboratories for science with modern equipment. Excellent opportunities for home economics, library study, music, art. Modern gymnasium. Special care for health of students; out-door life. Christian influences; undenominational.

President Lucella Clay Carson, A. M., LL. D. For catalogue address Registrar,
Mills College P. O., Calif.

Miss Harker's School for Girls

PALO ALTO, CALIFORNIA

Accredited to College. Music, Arts and Crafts, Home Economics, Physical Training, Out of Door Life, Sleeping Porch. Number limited. Address

MISS HARKER, Palo Alto.

PORTLAND ACADEMY

Corner of Montgomery and Thirteenth.

Office hours 9 a. m. to 12 m.

Fits boys and girls for college. Graduates enter on examination Harvard, Princeton, Yale, Bryn Mawr, Massachusetts Institute of Technology; on certificate Amherst, Cornell, Smith, Vassar, Wellesley, Goucher, Reed and other colleges and universities of the Pacific Coast.

Well equipped laboratories in Chemistry and Physics. Field practice in Surveying. Departments in charge of college men and women. Classical, Scientific, Modern Language, and Commercial Courses. Gymnasium under skilled director. Track and field athletics. The school includes a thorough Primary and Grammar School. Easy of access from all parts of the city. Catalogue on application.

St. Helens Hall

Portland, Oregon

Resident and Day School for Girls in charge of Sisters of St. John Baptist (Episcopal) Collegiate, Academic and Elementary Departments, Music, Art, Elocution, Gymnasium. For catalog address THE SISTER SUPERIOR
Office 31st. Helens Hall



Make the Farm Pay

Prof. Brooks

Complete Home Study Courses in Agriculture, Horticulture, Floriculture, Landscape Gardening, Forestry, Poultry Culture, Farm Accounting and Veterinary Science under Prof. Brooks of the Massachusetts Agricultural College, Prof. Craig of Cornell University, Prof. Bexell of the Oregon Agricultural College and other eminent teachers.

Over one hundred Home Study Courses under able professors in leading colleges. 250-page catalog free. Please address

THE HOME CORRESPONDENCE SCHOOL
DEPT. 201, SPRINGFIELD, MASS.

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

WE SPECIALIZE IN
APPLES

Ridley, Houlding & Co.

COVENT GARDEN, LONDON

We Want to Represent the Growers of

BETTER FRUIT. We know that our

BETTER METHODS of selling will bring

BETTER RESULTS

A Trial Solicited

All Shipments Receive Personal Attention

mand a chance to exert its potent influences on a trade that has already been exploited to such dangerous limits that the least untoward influence will set in motion a force that will ride over us and crush us. It may be that it will be a public opinion that over-speculation will raise up against us, or it may be that unfavorable industrial conditions will furnish a force over which we cannot prevail, or, as it is very likely, the poor quality of the product that comes out of our storages under present inducements to speculate will furnish elements which will lead to our undoing, but certain it is that unless we use ordinary skill in inspection, due care as to prices and its effect on the consumer, we shall have to reckon with one and all of these forces at no distant day, and much depends on the future attitude of the storages and the banks as to whether or not we shall be prepared to meet them. Since the dawn of human history the apple has been the emblem of temptation. Had some of our modern cold storages, with their allies, the too liberal banks, had a plant in the Garden of Eden sin would not have entered the world, for they would have made Adam such liberal advances to store his fruit and such highly colored representations of the future market that he would have stored for a rise, and all of Mother Eve's blandishments could not have made him part with his fruit at the gathering season. Now these conditions are largely brought about by the fact that storage capacity has increased out of proportion to the crop, thus leaving a surplus of space to dispose of larger than the normal crop requires. This leads to the cutting of the price of storage to a point that is unprofitable to the warehousemen, and is sought to be overcome by an extraordinary effort to fill their space regardless of the price of storage or the quality of the commodity. Warehousemen of this class do not have an overabundance of funds with which to induce speculation, but banks have become, often unwillingly, largely interested in these cold storages—sometimes larger than they would care to admit—and in order to keep them from bankruptcy they become the not too willing allies of the nominal owners of



When You Go East

TAKE THE STANDARD RAILWAY OF THE NORTHWEST

To Chicago North Coast Limited---by way of Minneapolis, St. Paul, Milwaukee. Drawing-room, Compartment, Standard and Tourist Sleeping Cars, Coach, Diner and Observation-library Car with barber and bath. Runs via Northern Pacific and Chicago & North Western lines.

To St. Louis Atlantic Express---by way of Minneapolis, St. Paul, Aurora. Standard and Tourist Sleeping Cars, Coaches and Dining Car. Runs via Northern Pacific and Burlington Lines.

Mississippi Valley Limited---similar to Atlantic Express. Runs via Northern Pacific and Burlington lines.

Let us ticket YOU via this Standard Railway of the Northwest.

A. D. CHARLTON, A. G. P. A.
255 Morrison Street, Portland

Summer Tourist Tickets to the East Now on Sale

Annual Rose Festival, Portland, June 10-15, 1912
Montamara Feste, Tacoma, June 30-July 4, 1912
Grand Lodge, Order of Elks, Portland, July 9-13, 1912
Golden Pollatch Carnival, Seattle, July 15-20, 1912
Yellowstone National Park, Season June 15-Sept. 15, 1912
Panama-Pacific International Exposition, San Francisco, 1915

Northern Pacific Railway

Original, Direct and Only Line to Gardiner Gateway, Official Yellowstone Park Entrance

ALFRED W. OTIS

81 Beach Street
NEW YORK, N. Y.

92 Commercial Street
BOSTON, MASSACHUSETTS

Apples for American and Foreign Markets

Agent for

Woodall & Co., Liverpool

M. Isaacs & Sons, Ltd., London

Thomas Russell, Glasgow

Also Leading Apple Receivers in other markets

SHIPMENTS FORWARDED FROM BOSTON OR NEW YORK

Market quotations and full particulars on application.

Correspondence invited.

these plants and make such large advances as would make their conservative stockholders and depositors shudder if they knew it. Examples could be multiplied on this point if circumstances required it. These allegations may be denied, but they are nevertheless facts. In a schedule of liabilities of an insolvent concern filed lately I notice these significant figures of indebtedness: Banks and cold storages, \$60,000; general creditors, \$9,000;

assets, nominal. These figures are eloquent and should be prominently posted in the counting room of every banking house that has a cold storage attachment. Those involved doubtless were of the number that go among the growers and solicit fruit for storage, offering advances out of all proportion to value and practically guaranteeing future prices for fruit. These are the ones who start the cry of short crops and long prices, thus boosting growers'

ideas beyond the point where responsible dealers will buy and throwing the business into the hands of those who operate on the money advances offered by a too anxious money institution or storage company. This condition is what brings into the business a lot of men who have all to win and nothing to lose, and drives out of it the conservative element which is necessary to continued success in any line of business.

The man or firm who operates upon his own money or credit buys his fruit carefully, inspects it thoroughly and stores what he can pay for. The irresponsible tool of the storages and banks buys anything and everything, knowing he has nothing to lose and hoping that a gullible public may take his plunder at price enough above his advances to support him. Whether consciously or not, whether designedly or not, these conditions are driving conservatism out of our business, and in the end will result disastrously to the grower and every legitimate interest involved. It has already resulted in storages having to look for a new set of stors every year, and this has become an admitted fact by many of the storage managers themselves. It is rapidly becoming a question which must either decide itself in favor of the "piker" or the responsible dealer, as there is no room left in the business for both. It is a question in which both the producer and the consumer are vitally interested, and one which the banks and the storage men can do most toward deciding. These storage managers care not a farthing about the quality of the fruit they open their doors to; the thirty or forty cents they are to receive for refrigeration is all they care about, consequently we cannot look to them to aid us in our efforts for quality. But may we not reasonably turn to our friend, the banker, and ask him to use common sense in inspection and ordinary conservatism in making loans not out of proportion to the value of his collaterals? May we not ask him to help us in raising the quality of an important commodity by refusing to be made a party to wildcat operations and encouraging speculation and under-grading with the weight of his depositors'

Astoria and North Beach

Via the delightful Columbia River Route on

The Steamers

T. J. POTTER HASSALO and HARVEST QUEEN



FROM ASH STREET DOCK

STEAMER "T. J. POTTER" leaves Portland at 10:30 p. m. daily (except Sunday and Monday), arriving Astoria 6:00 a. m. and Megler at 7:30 a. m. Returning leaves Astoria daily except Sunday, Monday and Tuesday at 7:00 a. m., Megler at 9:30 a. m., arriving Portland 4:30 p. m. On Sunday, leaves Astoria 7:00 a. m., Megler 9:00 p. m., arriving Portland at 5:30 a. m. Monday.

STEAMER "HASSALO" leaves Portland daily (except Saturday and Sunday) at 8:00 a. m., Saturday at 1 p. m., arriving Astoria 1:30 p. m., Megler 2:15 p. m. On Saturday arriving Megler 6:30 p. m. Returning leaves Megler daily except Saturday and Sunday at 2:45 p. m., arriving Portland 10:00 p. m. Sunday leaves Megler 9:00 p. m., arriving Portland 5:30 a. m.

STEAMER "HARVEST QUEEN" leaves Portland daily (except Saturday and Sunday) at 8:00 p. m., Saturday at 10:00 p. m., for Astoria and way landings. Returning leaves Astoria daily except Sunday at 7:00 a. m., arriving Portland 6:00 p. m.

EXCELLENT RESTAURANT SERVICE (Meals a la carte)

Trains meet all boats at Megler for North Beach points

Astoria	\$ 1.50
North Beach { Saturday-to-Monday tickets	3.00
{ Season tickets	4.00
{ Five-Ride Round-trip tickets	15.00
One-day River Trip, Portland to Megler and return....	2.00
Stateroom reservations can be made at Ash Street Dock or	

CITY TICKET OFFICE

THIRD AND WASHINGTON STREETS, PORTLAND

DO YOU WANT

Expert, Modern and Up-to-date Marketing Service
IN THE HANDLING OF YOUR

Apples, Pears, Peaches, Prunes, Cherries, Etc.?

A service not only country-wide, but reaching into foreign countries as well.

A service that is prepared to sell f.o.b.—in transit—on arrival—at auction—through store—hold in cold storage for later market, or in whatever way is best available at the time and which presents the best prospect as to results.

IF THIS IS WHAT YOU WANT

Write us. We are prepared to take on a limited number of good accounts in these commodities.

IF YOU DO NOT KNOW US—ASK ANYONE

G. M. H. WAGNER & SONS, 123 W. So. Water Street, CHICAGO

money, which he places too liberally on fruit without regard to quality or real market conditions? Accomplishing these results, gentlemen, you will have done most toward putting your business on so sound a basis as to make it best for the producer, the consumer and yourselves, and you will have welded a link in the chain of success which will make you worthy of the great body of international business men to which you and I belong. The measure of your capabilities is the success you attain. The strength of your organization will be measured by your achievements. In our effort to improve the quality of our goods and uplift the standards of our business let us do all we honorably can to prevent the servant becoming the master.

Yellow Blight of Tomato

Any tomato grower interested in the discovery of some method of the control of the yellow blight of the tomato is given an opportunity to co-operate with the plant pathologist of the experiment station. Much progress has already been made in the direction of ascertaining the nature and habits of the causative organism, but many facts are difficult to secure by one man unless his observations cover a period of many years. In order to shorten this period the experiment station desires to collect a mass of data for this coming season; and to secure these data a list of questions will be sent to each grower who cares to lend a hand. It need hardly be said that such assistance will meet with the genuine appreciation of the plant pathologist. Help yourselves by helping him. Write a letter today to H. B. Humphrey, plant pathologist of the Experiment Station, Pullman, Washington.

Winter-Killed Fruit Trees

During the past winter reports have been received by the Horticultural Experiment Station of a great many young orchards that have been more or less injured by winter killing of the young trees. This has not been due in each case to excessive cold, but more frequently to the trees being permitted to grow rapidly until checked by frost. The wood was not properly matured

and ripened before the trees went into winter quarters. In some cases the temperature in the winter has fluctuated rapidly from several degrees below freezing to above freezing, and this condition, working in combination with the fall weather, has produced the winter killing. The winter killing of young trees is usually indicated by dark colored splotches on the bark and sap wood. It is most common near the tips of the young shoots, but in many cases it is found in irregular splotches over the entire tree top and trunk. Trees that have been severely winter killed should be severely pruned, cutting away as much as possible of the injured wood and leaving only fresh, clean wood. Improve the process of cultivation and tillage the following season and usually the plants will, to a large extent, overcome the injury within a year or so. If the trunk of the tree is severely injured it can be cut back and permitted to send up the sprout which can take the place of the original top. In the case of a few isolated trees in an orchard, the sprout renewing the top

may come from below the union of the scion and stalk, and in this case it will be necessary to bud or graft this stalk at the point where it is desired to have the framework of the trees developed. This is a successful method if carefully practiced and will produce results in less time than could be accomplished by digging out a three-year-old tree and replanting. There is no treatment in the form of a fertilizer or special application that can be given that will be more beneficial to the trees than simply good tillage with a good supply with a good supply of water, in order that the trees may make a full normal growth during the summer.—Washington State Experiment Station Bulletin.

CHEEK-TO-CHEEK GRADING



EVENTUALLY YOU WILL WANT OUR ADDRESS
SCHLENGER FRUIT GRADING MACHINE CO.
OGDEN, UTAH.

D. Crossley & Sons

ESTABLISHED 1878

Apples for Export

California, Oregon, Washington, Idaho and Florida fruits. Apples handled in all European markets at private sale. Checks mailed from our New York office same day apples are sold on the other side. We are not agents; **WE ARE SELLERS.** We make a specialty of handling **APPLES, PEARS AND PRUNES** on the New York and foreign markets. Correspondence solicited.

200 to 204 Franklin Street, New York

NEW YORK

LIVERPOOL

LONDON

GLASGOW



APPCO Shipsafe

Standard Apple Packing

- No. 1.** The APPCO Dozen Box ready to close.
- No. 2.** Closed and Sealed with grower's label.
- No. 3.** To Ship—six 1-doz. boxes are enclosed in an Appco Shipsafe.

NO REFRIGERATION against cold should be necessary. No bruising or marking of any kind.

LOWEST FREIGHT RATE. Approved by the Interstate Commerce Commission.

Write for "Fruit Bulletin" for prices and particulars on how to protect your fruit.

Appco Corrugated Caps for barrels, 14 to 16½ inches.	
Per 1,000, - - - - -	\$7.00
Appco Corrugated Box Lining, for any size box.	
Per 1,000, - - - - -	6.00

APPCO CAPS are better. SAMPLE sent on request.

American Paper Products Co.,
252 Bremen Avenue, St. Louis, Mo.

BELKNAP ORCHARD WAGON

Mr. Fruit Grower:
Are you thoroughly equipped to handle that big fruit crop that is in sight? We doubt it, unless you have a Belknap Orchard Wagon. Get our circular and price.



Fruit Growers' Supply Co., Spokane, Washington

H. S. GALLIGAN
C. F. GALLIGAN
G. T. GALLIGAN

True-to-Name Nursery

INCORPORATED
HOOD RIVER-DUFUR, OREGON

Wholesale and Retail—Sixteen years in the business

We offer for fall and spring 1912-13: Apple, pear, cherry, peach, apricots, plums and prunes of the leading varieties adapted to this locality. These are all grown on No. 1 whole roots from buds and scions selected from the best bearing trees in Hood River, hence we are in a position to not only guarantee our trees true-to-name but of the best bearing strains. Commercial orchard plantings our specialty.

If interested write us; we have what you want.

Address TRUE-TO-NAME NURSERY Hood River, Oregon
Phone 2002K

The Nursery That Has Made Good

Is the one that should receive your patronage. Don't waste time by getting your stock from an unknown, untried source. Save worry and time by placing your order with a reliable concern that has made good.

Do you know we put out the broadest guarantee of any reputable firm? Why? Because we want to give you and every other customer full value for money expended.


Have you seen our handsome catalog? It's a beauty. Besides showing our complete line, there is a list of hardy fruits, directions for planting, and a spraying calendar.

Don't take chances. Place your order with the

Yakima Valley Nursery Company

"The Nursery that has Made Good"

More Salesmen Wanted
Toppenish, Washington



The Feast of Apple Bloom

By Sam L. Simpson

When the sky is a dream of violet
And the days are rich with gold,
And the satin robe of the earth is set
With the jewels wrought of old;
When the woodlands wave in choral seas
And the purple mountains loom,
It is heaven to come with birds and bees,
To the feast of apple bloom.

For the gabled roof of the home arose
O'er the sheen of the orchard snow,
And is still my shrine when storms repose
And the gnarly branches blow;
And the music of childhood's singing heart,
That was lost in the backward gloom,
May be heard when the robins meet and part
At the feast of the apple bloom.

And I think, when the trees display a crown
Like the gleam of a resting dove,
Of a face that was framed in tresses brown
And aglow with a mother's love;
At the end of the orchard path she stands,
And I laugh at my manhood's doom,
As my spirit flies with lifted hands
To the feast of apple bloom.

When the rainbow paths of faded skies
Are restored with the diamond rain,
And the joys of my wasted paradise
Are returning to earth again,

It is sadder than death to know how brief
Are the smiles that the dead assume;
But a moment allowed, a flying leaf
From the feast of apple bloom.

But a golden arch forever shines
In the dim and darkening past,
Where I stand again as day declines,
And the world is bright and vast;
For the glory that lies along the lane
Is endeared with sweet perfume
And the world is ours, and we are twain
At the feast of apple bloom.

She was more than fair in the wreath she wore
Of the creamy buds and blows,
And she comes to me from the speechless shore
When the flowering orchard glows;
And I sigh for the dreams so sweet and swift,
That are laid in a sacred tomb—
Yet are nothing at last but fragrant drift
From the feast of apple bloom.

[From "Gold-Gated-West." For sale by
A. J. Martin, 643 Hamilton Building, Portland,
Oregon.]

Raisin Importations

The largest importation of raisins on record is that of 1884, when a total of 54,000,000 pounds entered the country, as against but 2,500,000 pounds in the fiscal year 1911. The marked falling off in importations of raisins is the result of the rapid increase in domestic production, which first attained commercial importance in the early seventies. The American raisin industry had its beginning in the great San Joaquin Valley of California, which is still the chief producing area in the United States. In 1873 the California crop was but 120,000 pounds, while in 1910 it had grown to 112,000,000 pounds. While these figures suggest a growing consumption of raisins the per capita consumption of raisins in the United States in 1910 was but one and one-half pounds, compared with five pounds in the United Kingdom.—Argonaut.

Eradication of Ants

Common ants are becoming a serious pest, both indoors and out-of-doors, in many parts of this state. The entomologist of the State Experiment Station at Pullman gives the following advice as to methods of controlling or combating them: The surest way of preventing injury by ants is to destroy their nests. Usually the nests can be readily found,

SOIL Rich black gravelly loam with clay subsoil, very productive with irrigation.

WATER Abundance of fine water over which there never can be litigation.

MARKET Three miles from Spokane's 125,000 hungry people. Easy access to mining, timber, wheat belts of Inland Empire, as well as Eastern markets.

TRANSPORTATION Spokane the largest railroad center west of Mississippi River. Three steam roads, two electric lines through our property.

CLIMATE - Fine

CONVENIENCES Electric light, domestic water, mail delivery, street cars, etc.

Write for particulars to

OPPORTUNITY-VERA LAND CO.

403 Sprague Avenue

Spokane, Washington

Hood River Nurseries

Have for the coming season a very complete line of

Nursery Stock

Newtown and Spitzenberg propagated from selected bearing trees. Make no mistake, but start your orchard right. Plant generation trees. Hood River (Clark Seedling) strawberry plants in quantities to suit

SEND FOR PRICES

RAWSON & STANTON, Hood River, Oregon

but if there is any difficulty a little watching of where the ants travel will show where the nest is located. If the nests are out in the field punch a few holes with a stick in the nests and place a couple of tablespoons or carbon disulphide in each hole, covering up immediately with the foot so as to throw a capping of dirt into the hole. The fumes of carbon disulphide are very heavy and will rapidly pass through the nests, filling all the chambers and suffocating the ants. This liquid can be purchased at the drug store. Care must be taken in using it, as it is extremely inflammable like gasoline. This method answers much better than using ashes or boiling water, which are usually unsuccessful in exterminating the ants. Ants in houses

can be trapped to a sponge moistened with sweetened water. When many ants congregate on the sponge they can be destroyed by a little boiling water from the teakettle. If ants crawl up fruit trees and destroy the blossoms or young shoots they can be kept from doing this by tying a fluffy band of cotton around the trunks. Ants will not walk over fluffy cotton unless they are very much excited.—Washington State Experiment Station Bulletin.

Apple Shipments

As the apple shipments have now ceased for the season, the following figures may be of interest. Total shipments for the season 1911-12 were as follows: From Nova Scotia, 1,150,000

barrels; Canada, 375,000 barrels; America, 1,072,051 barrels; a total of 2,607,000 barrels.

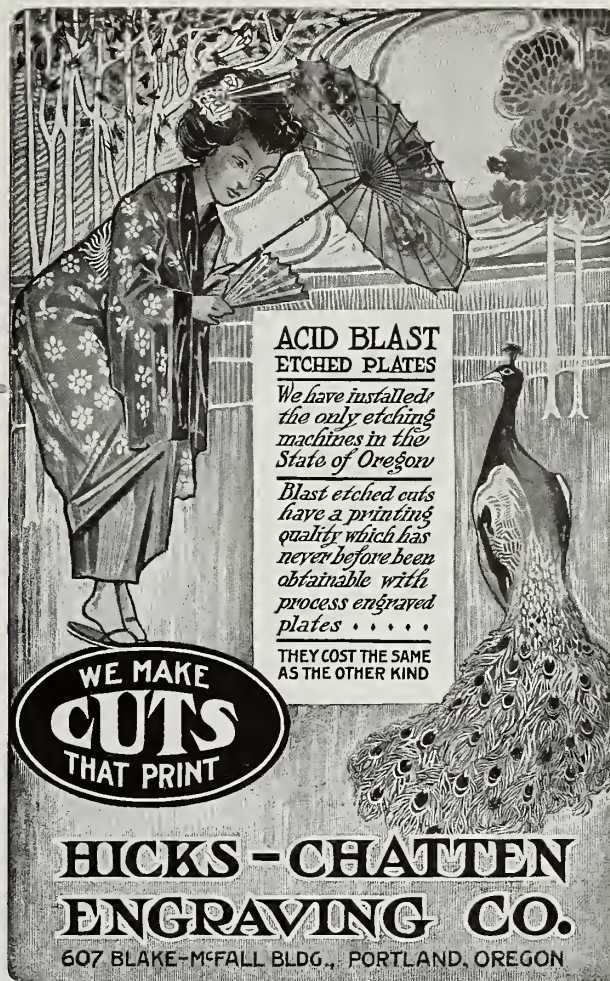
Of the lot from America probably 100,000 were pears. The total number of boxes shipped from America was 489,961, which were shipped to the following ports: To Liverpool, 134,213; to London, 192,237; to Glasgow, 47,782; to Hamburg, 59,767; to various ports, principally Scandinavian ports, 45,962.

As a rule these figures are seldom dissected, and many Americans, seeing the total of 2,607,000 barrels, might think these were all shipped from the United States. As will be seen from the above figures, Nova Scotia shipped out more apples than the United States.—Exchange.

The highest types of apple in the world today are the Hood River Spitzenberg and Yellow Newtown Pippin; the highest type today to Hood River's cosmopolitan people of a life insurance policy is a Policy of the National Life Insurance Company of the United States of America, of Chicago.

These Policies, which hundreds of your neighbors have, make superb Christmas presents, Happy New Year gifts, appropriate wedding presents, choice birthday reminders and unexcelled anniversary tokens.

Write for information to the Agent at Large, Dr. James H. Shults, Hood River, whom most of you know, quote "Better Fruit," and full and satisfactory information will be furnished and hurry orders will receive prompt attention by telegraph and special delivery letters.



ACID BLAST ETCHED PLATES

We have installed the only etching machines in the State of Oregon

Blast etched cuts have a printing quality which has never before been obtainable with process engraved plates

THEY COST THE SAME AS THE OTHER KIND

WE MAKE CUTS THAT PRINT

HICKS - CHATTEN ENGRAVING CO.

607 BLAKE-McFALL BLDG., PORTLAND, OREGON

For Sale

55 acres irrigated land in Yakima Valley, 9 miles from both Toppenish and Wapato; 2½ miles from T. S. & W. Railway, now laying steel; 10 acres apple orchard, mostly 3 years old; 10 acres clover and timothy, 20 acres alfalfa; balance plow land; deep volcanic ash soil with underlying gravel; lies well for irrigation. Shack, barn, well; fenced. \$175.00 per acre—little more than price of raw land in vicinity. Terms. No exchange. For details write owner.

J. H. BEST, Wapato, Washington

VIRGINIA APPLE ORCHARDS

PAY BIG PROFITS



\$350.00 on long time and easy payments buys a ten-acre Apple Orchard tract in "The Beautiful Shenandoah Valley of Virginia." Other farm and fruit lands \$15.00 per acre and up. Write now for last issue "The Southern Homeseeker," other interesting literature and low excursion rates. Address, F. H. LaBaume, Ag'l Agt., Norfolk & Western Ry., Box 3947, Roanoke, Va.





DISTRIBUTORS

For Shippers and Associations

Fruits and Produce

Indianapolis, Indiana



The Indianapolis Market An Up-to-Date One

NO city in the United States of its size has had any more publicity than the City of Indianapolis. It surely is the place where they do things. It has a population of 250,000, with a floating population of 50,000, making a population of 300,000, and a tributary population of over one million, with interurban cars reaching almost every town and city in the state. In fact Indianapolis, being situated in the center of the state, reminds one of the hub of a wheel, the interurban lines acting as spokes. There are fourteen interurban lines running out of Indianapolis, besides thirteen steam roads. Shipping facilities are superb. This is one of the principal reasons why Indianapolis is growing so fast and the large volume of produce consumed, due to quick transportation. No doubt every reader of "Better Fruit" has read about the magnificent automobile races just recently pulled off at Indianapolis, which is an illustration of how they do things. Indianapolis is the second largest manufacturer of automobiles in the United States. The cold storage facilities are equal to any in the United States.



Commission Row, Indianapolis, Indiana, at 4 o'clock a. m., looking north on Delaware Street. Interurban cars in the center of the picture were loaded with strawberries, fresh from the patches of Southern Indiana. Loaded the evening of the 4th and unloaded at the doors of the dealers at 4 a. m. June 5, 1912.

To show one the rapidity at which Indianapolis is moving the merchants, collectively foreseeing the requirements for more space, purchased a tract of 575 acres of ground adjoining Indianapolis to accommodate manufacturers from other parts of the

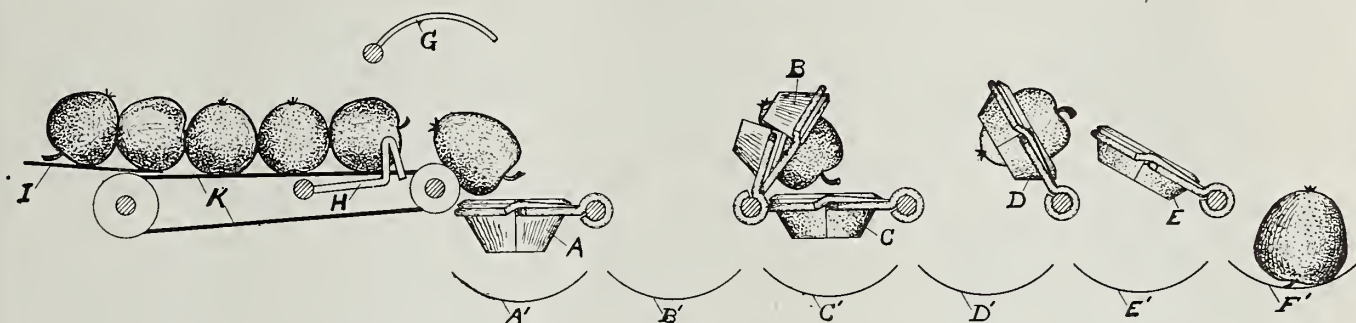
United States who have been knocking at her door for admission. This tract is known as "Mars Hill," and will involve an outlay of \$500,000. There are 2,600 lots for residence purposes for the employes of the manufacturers who desire to locate on the 575 acres allotted for manufacturing purposes. This gigantic scheme will increase the population quite materially when completed and is another proof they do things at Indianapolis.

Getting back to where we started. The fruit and produce dealers of Indianapolis are as live and up-to-date as any bunch of fruit and produce men in the United States. This is proven by the thousands of carloads handled each year. The railroad companies concede that the fruit and produce dealers pay more freight than any other class of merchants in the City of Indianapolis. There are thirty dealers there. The dealers of Indianapolis extend an invitation to all shippers to visit Indianapolis, that they may see one of the liveliest and most up-to-date metropolitan cities in the United States.—Contributed.



Commission Row, Indianapolis, Indiana, 4:15 a. m., looking west on Maryland Street

Schellenger Fruit Grading Machine



Have you seen the endorsements of those who used the Schellenger Fruit Grading Machine during the 1911 packing season? We publish a list of them in our free book entitled *Modern Methods of Grading and Packing Fruit*. Every machine gave entire satisfaction because they did the work with mechanical accuracy and made money for their owners.

You can absolutely rely upon getting these same results for yourself. No doubt is involved. WE GUARANTEE IT.

*This machine will put your orchard on a paying basis
Hadn't you better look them up?*

EVENTUALLY YOU WILL WANT OUR ADDRESS

Schellenger Fruit Grading Machine Co.

References: Our customers

OGDEN, UTAH

Insect and Fungus Enemies

Continued from page 19

a much higher benefit from spraying operations than formerly, and while results vary, depending upon weather and other conditions, yet the successful orchardist now expects to harvest, as sound fruit, from 90 to 95 per cent of his crop. Fruitgrowers have now become quite familiar with lime-sulphur sprays as a remedy for the San Jose scale, peach leaf-curl and blister mite and other troubles requiring dormant tree treatment. The lime-sulphur wash, as used on dormant trees, has gone through a good deal of evolution since the California formula was first employed in the East. Whereas a few

years ago it was the practice to make the wash at home for immediate use, utilizing for this purpose in many cases very large cooking outfits, the tendency at the present time is toward the employment of the commercial lime-sulphur solution, a concentrate which is kept indefinitely and used as needed, or similar home-made solution, both of which are prepared on a distinctly different formula from the wash as formerly used. A distinct advance was made in the control of fungous diseases when it was found that these commercial and home-made lime-sulphur concentrates, properly diluted, could be used with satisfactory results as fungicides on trees in foliage, replacing bordeaux mixtures,

the use of which is attended with danger of russetting the fruit and injuring the foliage, depending upon weather conditions.

Home-Boiled Lime-Sulphur Solution. Concentrated lime-sulphur solution, to be diluted and used for the summer spraying of orchards, may be prepared by boiling together for about fifty minutes one hundred pounds of sulphur, fifty pounds of lime and water to make fifty gallons of concentrated solution. Any finely powdered sulphur of 98 to 99 per cent purity may be used. The commercial ground sulphur is the cheapest form and is as good as the flowers or flour for that purpose. The best grade of fresh stone lime is required for the best results, although

Pearson Nails

(CEMENT COATED)

ARE THE ORIGINAL AND ONLY GENUINE



WE MAKE 200 DIFFERENT SIZES.
SUITABLE FOR EVERY PURPOSE

When anyone offers you another kind representing them as "just as good" as "PEARSON'S," they are trying to deceive you. Conscientious dealers will not try to do so. They know better.

In the protection of your own interest refuse every substitute and demand "PEARSON'S."

For sale by hardware dealers everywhere.

J. C. PEARSON COMPANY

BOSTON, MASSACHUSETTS, SOLE MANUFACTURERS

A. C. RULOFSON CO., 315 Monadnock Building, San Francisco, California
Pacific Coast Sales Agents

Smith's Self-Feed Nail Stripper

(For Hand Nailers)

Used by Expert Box Makers

Handles all size nails
2d to 10d

URNS OUT BOXES FASTER

Order Sample Now

Price \$10.00
DELIVERED

Liberal Trade Discount
Agents Wanted



Smith's "Security Paper Holder"

All packers realize the enormous waste of paper occasioned in the wrapping of fruits by the non-use of paper holders. We guarantee this Holder will save its price in time and paper.

MOST CONVENIENT
Automatic and Non-Breakable

Price \$1.00 each, delivered at any express office in the United States. (Liberal discount to the trade.)

A. C. RULOFSON CO.

No. 315 Monadnock Building, San Francisco, California
DISTRIBUTING AGENTS

a good grade of hydrated lime may be used, provided proper allowance be made for the high percentage of moisture it contains. The boiling may be done in barrels or vats with steam or in kettles over a fire. An ordinary 75 to 100-gallon food cooker, composed of a kettle with jacket and fire-box, is perhaps the most convenient and economical outfit for small and medium sized orchards. Place about one-fourth of the required amount of water in the kettle, bring it to the boiling point, then put in the lime and immediately add the sulphur. Stir vigorously until the lime is slaked, then add sufficient water to finish with fifty gallons of the concentrated solution and boil for fifty minutes. The total time of actual boiling should not exceed one hour, and as a rule a boiling period of only fifty minutes gives better results. After the sulphur has gone into the solution, combining with the lime to form sulphids, further boiling brings about a chemical change which finally results in throwing some of the sulphur out of the solution to form a sediment. The sulphur should first be passed through a sieve to break up any lumps that it may contain, and there is perhaps some advantage in working it into a thick paste with water before adding it, or the sulphur may be placed in the kettle first and worked into a paste before adding the lime. In order to finish with fifty gallons of solution the kettle should be filled to about fifty-eight gallons, on account of evaporation. If the water evaporates to below fifty gallons more water should be added to make up the loss. A measuring stick with a fifty-gallon mark, and other marks as desired, will be found useful in determining the amount of liquid in the kettle. When steam is used the process is about the same as above described. Owing to the condensation of the steam a somewhat smaller amount of water is required. When the boiling is finished the solution should be poured through a strainer of about twenty meshes to the inch, so as to remove the coarse particles of sediment. It may be used immediately or stored in barrels or other containers and kept indefinitely, provided the air is excluded. In practice the fruitgrowers as a rule have not been able to prepare the lime-sulphur solution without obtaining a large amount of sediment, and this has tended to make the commercial product more popular. This sediment is largely due to impurities in the lime and improper mixture and boiling. Straining will take out the coarser particles and the remainder will not prove to be seriously objectionable. After the sediment has been settled the clear liquid should test 25 to 28 degrees on the Baume hydrometer. It takes about two gallons of the home-made preparation to equal in strength one and one-half gallons of the commercial product, and these amounts, respectively, are the amounts required for each fifty gallons of spray. For the summer spraying of apple trees lime-sulphur solution, whether home-made or commercial, should be so diluted as to contain three



A Wise Choice

When you select a spraying outfit, make sure of its efficiency and durability. Don't choose one in a haphazard fashion—benefit by the experience of hundreds of Pacific Coast farmers and fruit growers who have used the

DOUGLAS SPRAY PUMP

The name "Douglas" stands for excellence—60 years' extensive and ever-growing use on the Pacific Slope proves this. Made in all sizes and shapes to meet every spraying requirement. Write for 1912 Catalog.

Sold by PARLIN & ORENDORFF, PLOW CO.
Portland, Oregon, and Pasco, Washington

W. & B. DOUGLAS
16 Broad St. Middletown, Conn.
Manufacturers of Cistern Pumps,
Deep Well Pumps, Power Pumps
and Pumps for Fire-Fighting
and Forestry Purposes.



SILVER SUDS

The best Cleanser and Polish for Gold, Silver, Plated Ware, Tin, Aluminum, or any surface where a brilliant luster is desired.

Perfectly harmless
Saves times, labor and money

It is a household necessity and a comfort to all who use it. A single package makes a full pint.

Price 35 cents a package

Address **ST. MARKS GUILD**
Box 131 Hood River, Oregon
Agents for Oregon and Washington

W. van Diem

Lange Franken Straat 45, 47, 49, 51, 61
ROTTERDAM, HOLLAND
European Receivers of American
Fruits

Eldest and First-Class House in
This Branch

Cable Address: W. Vandiem
A B C Code used; 5th Edition

Our Specialties are
**APPLES, PEARS AND NAVEL
ORANGES**

RICHLAND NURSERY CO.



TREES

Not little sprouts or saplings, but
healthy specimens with perfect
ROOTS

We go strong on roots, for we
know your future harvest and our
future business depends on root
insurance—Good roots mean good
fruits. Catalogue for 1912 is
yours for the asking.

Richland Nursery Co.
Richland, Washington

and one-half to four pounds of sulphur in each fifty gallons of spray. Prepared according to the above directions, one gallon of the home-made product contains approximately two pounds of sulphur in solution, and therefore two gallons would give the requisite amount of sulphur for each fifty gallons of spray. For spraying trees during the dormant season it should be used much stronger, twelve to fifteen pounds of sulphur to each fifty gallons of diluted spray being required. For dormant tree spraying about seven gallons of the home-made solution in each fifty gallons of spray would, therefore, give the proper strength.

Commercial Lime-Sulphur Solution.
For some years manufacturers of insecticides and fungicides have had on the market concentrated solutions of lime-sulphur, originally designed as treatment for the San Jose scale, which obviated the necessity of orchardists preparing the wash at home. These solutions have now come to have a much wider range of usefulness, forming a satisfactory substitute, in most cases, for bordeaux mixture as a fungicide. These concentrated solutions for the most part are well made and are fairly uniform in strength, registering from 30 to 34 degrees on the Baume scale. Many orchardists prefer to use them rather than to prepare the spray at home. In the case of small orchards their use is doubtless advisable, but where the orchard interest is considerable the fruitgrower might well afford to prepare the concentrate at home. In the use of the commercial lime-sulphur solution, as in the home-made solution, the orchardist should know rather exactly the proper dilution to make which will insure the control of the troubles in view, and on the other hand not prove injurious to the foliage and fruit. Dilutions are based on the strength of the concentrate as shown by its specific gravity. Thus commercial lime-sulphur showing a density of 32 degrees on the Baume scale should not be used stronger than one and one-half gallons for each fifty gallons of spray. According to the writer's observations a variation of two degrees above or below the density indicated is immaterial as regards danger of foliage injury, so that the recommendations hold for practically all of the commercial concentrates on the market. Where the fungous troubles to be treated are not very serious it is recommended that only one and one-quarter gallons of the concentrate should be used to each fifty gallons of spray in order to eliminate, in so far as possible, the danger of injury to fruit and foliage.

Bordeaux mixture is composed of copper sulphate (bluestone) and quicklime, with a certain quantity of water. The amounts of copper sulphate and of lime to be used with a given quantity of water vary somewhat, according to the kind of plants or trees to be sprayed and the disease to be treated. When used on the apple the following formula is quite satisfactory for gen-

MYERS SPRAY PUMPS ALL KINDS

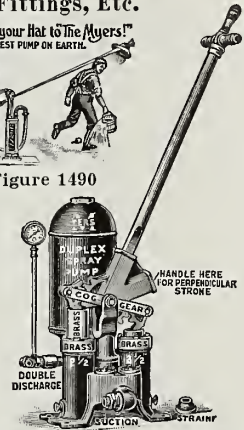
Nozzles, Fittings, Etc.

Take off your hat to the Myers!
BEST PUMP ON EARTH

Figure 632



Figure 1490



We manufacture Spray Pumps for every need from the small hand and bucket pumps to the large power outfits.

Send for Catalogue and Prices of Pumps, Hay Tools and Barn Door Hangers

F. E. Myers & Bro.

120 Orange Street

Ashland, Ohio

Distributing Agents

MITCHELL, LEWIS & STAVER CO.

Portland, Oregon Spokane, Washington Boise, Idaho

Do You Want A Home in the Beautiful Ozarks?

of Missouri, in the famous Strawberry Land? Apples, peaches, pears, grapes, raspberries, etc., all grow excellently. Ideal location for the dairy and poultry business.

The winters are mild and of short duration. An abundance of rainfall during the summer months assures plenty of moisture for growing crops.

We offer for sale 60,000 acres of land in 40-acre tracts or more, cheap and on easy terms. Located in Stone and McDonald counties. For further information address

McDonald Land & Mining Company

Rooms 301-2 Miners Bank Building
Joseph C. Watkins, Mgr. JOPLIN, MISSOURI

"LARCH" FRUIT PACKAGES

OF ALL KINDS

Apple and Strawberry Our Specialty
Give us a trial

BRIDAL VEIL LUMBERING CO.
HOOD RIVER, OREGON

TARRED ORCHARD YARN

FOR YOUR TREES

Right down to the minute method, for supporting heavily laden branches. Does not interfere with pruning, spraying, cultivating or thinning.

Does not chafe the limbs, when swayed by wind.

Being tarred, does not harbor insects.

Cheaper than props, and branches easily tied.

Sold by all dealers.

Manufactured by

The Portland Cordage Co.

PORTLAND, OREGON



The National Insecticide Law demands that all Arsenate of Lead shall contain—

Arsenic Oxide	- - - -	Not less than 12½%
Water Soluble Arsenic	- - - -	Not over ¾ of 1%
Moisture	- - - -	Not over 50%

And beyond these chemical requirements the Law is not interested.

The fact that all makers of Arsenate of Lead are required to come within the above restrictions does not by any means put the products of all manufacturers on an equality. The Law simply states the limit within which one can legally sell a product.

In the eyes of the Law, all men who do not break the Law are equal, but this does not imply that all men who are out of jail are equally high-class citizens.

The efficiency of and satisfaction received from the use of Arsenate of Lead are largely owing to its suspension, easy mixing and fast sticking qualities.

The Law does not attempt to regulate its manufacture in this respect, but these qualities, added to its killing power, make up the true value of an Arsenate of Lead.

The uniformity of the Grasselli Arsenate of Lead in all the above essentials is well known to the fruitgrowers of the United States, and it is the standard adopted by the Hood River Apple Growers' Union, Hood River; Rogue River Fruit & Produce Association, Medford; Yakima County Horticultural Union, North Yakima, and many other associations throughout the Northwest.

MANUFACTURED BY

The Grasselli Chemical Co.

CLEVELAND, OHIO

Distributers in all the Fruit Growing Districts

Get Away

GET AWAY from the cold winters, hot summers, tornadoes, sunstrokes, blizzards, electrical storms, to a place where they do not occur.

HOOD RIVER is free from all these conditions. Our scenery unsurpassed, our roads macadam and oiled, ranches electric lighted, good water, we are close to PORTLAND, our fruits command the top price, we are up to date.

Send for our printed list of large and small ranches and for our literature. We will furnish you with reliable information.

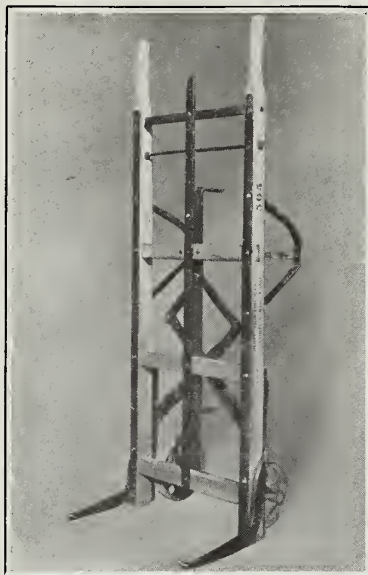
Write **GUY Y. EDWARDS & CO.**
HOOD RIVER, OREGON

eral orchard work: Copper sulphate (bluestone), 3 pounds; quicklime, 4 pounds; water to make 50 gallons. In bad cases of bitter rot or apple blotch it is often advisable to use four pounds of bluestone and six pounds of lime to fifty gallons of water instead of the foregoing. To make a single barrel of bordeaux mixture dissolve the bluestone in twenty-five gallons of water and in a separate vessel slake the lime and dilute it to twenty-five gallons. Then pour the two solutions simultaneously through a strainer into the spray tank. If large quantities are to be used stock solutions of the bluestone and lime should always be prepared, thus saving the time necessary to dissolve the materials. A stock solution of copper sulphate may be made by dissolving it at the rate one pound to each gallon of water. Fill a fifty-gallon barrel two-thirds or three-fourths full of water and place a sack (or box with perforations in the bottom and sides) containing fifty pounds of copper sulphate in the upper part of the barrel, suspending it by a string or copper wire. In from twelve to twenty-four hours the sulphate will have entirely dissolved, and the sack or box should be removed and enough water added to fill the barrel. After slight stirring the solution is ready for use. The stock lime may be prepared by slaking fifty pounds in a barrel or other vessel, and finally adding water to make fifty gallons. In slaking the lime sufficient water should be used to prevent burning, but not enough to "drown" it, and the mass should be continually stirred with a shovel or spading fork until a thin paste is formed. In making bordeaux mixture take the necessary quantities of the stock copper sulphate and the stock lime solutions to give the formula in the total amount of water to be used and place each in separate elevated dilution tanks, which should hold half as much as the total capacity of the spray tank. Thus, if the spray tank holds two hundred gallons each dilution tank should hold one hundred gallons, and, according to the above formula, twenty pounds of copper sulphate (twenty gallons of the stock solution) and twenty pounds of lime (twenty gallons of stock solution) would be required. To each dilution tank add water (one-half the total amount of spray), and after stirring allow the diluted ingredients to run through separate hose or troughs attached to faucets near the bottom of the tank into the strainer on the spray tank, where the two solutions come together, producing the bordeaux mixture. Only the quantity which can be used during the day should be mixed, as the bordeaux mixture deteriorates on standing. In case the dilution tanks are not elevated to admit of filling the spray tank by gravity, the diluted solutions must be dipped and poured into the latter by hand, a bucketful of each simultaneously. This method is advisable in small operations where a few barrels at most are needed. It is important that bordeaux mixture should be thoroughly strained in order to keep

out any coarse particles that would clog the spray nozzles, and it is a good practice to strain the stock solution of lime while pouring it into the dilution tank. The best material for a strainer is brass wire netting of about twenty meshes to the inch.

Arsenate of lead is the principal arsenical used in orchard spraying. It comes on the market in a putty-like paste, and to a more limited extent in the form of a powder. Its present large use is due to certain advantages it has over other arsenicals, in that it contains very little water-soluble arsenic, and is therefore much less likely to injure the foliage. It also adheres better than other arsenicals, such as paris green and arsenite of lime. All arsenicals used in spraying fruit trees may be used in bordeaux mixture. However, not all of these can be used in lime-sulphur solutions without danger of foliage injury. Arsenate of lead when added to lime-sulphur solution undergoes considerable chemical alterations, as shown by the prompt change in color of the mixture. Chemical analyses show that a small percentage of the arsenate of lead is broken down and lead sulphid and arsenate of lime formed. Abundant experience, however, has shown that this alteration of the chemical nature of the arsenical and of the lime-sulphur wash does not injuriously affect their efficiency as fungicides and insecticides, nor materially add to the danger of foliage or fruit injury. Arsenate of lead is used in bordeaux mixture or lime-sulphur at the rate of two pounds to each fifty gallons of spray. As there are numerous brands of arsenate of lead upon the market the grower should be careful to purchase from reliable firms. When the paste form of arsenate of lead is used it must be worked free in water before it is added to the spray. Powdered arsenate of lead is used at about one-half the strength of the paste form. In large spraying operations it will be more convenient to prepare in advance a stock mixture of arsenate of lead as follows: Place one hundred pounds of arsenate of lead in a barrel, with sufficient water to work into a thin paste, finally diluting with water to exactly twenty-five gallons. When thoroughly stirred each gallon of the stock solution will thus contain four pounds of arsenate of lead, the amount necessary for one hundred gallons of spray. In smaller spraying operations the proper quantity of arsenate of lead may be weighed out as needed and thinned with water. In all cases the arsenate of lead should be strained before or as it is poured into the spray tank. The necessary care should be exercised to keep the poison out of the reach of domestic and other animals.

Arsenite of lime is recommended by Stewart as an arsenical for use in lime-sulphur solution, but when so employed the Kedzie formula should be somewhat modified as follows: White arsenic, 2 pounds; sal soda crystals, 2 pounds; water, 1½ gallons. Boil these ingredients together in an iron vessel until entirely dissolved, which will require



PERFECTION CLAMP TRUCK

The best truck for the produce man, fruit associations, freighthouses, stores, etc., for handling all kinds of case, crate and box goods.

Holds the load; cannot accidentally release; cannot dump forward.

It will pay you to send for a descriptive circular that tells the whole story.

The Perfection Truck Co., Inc.

NORTH YAKIMA, WASHINGTON

FRUIT GROWERS, YOUR ATTENTION

Royal Ann, Bing and Lambert cherry trees; Spitzenberg and Newtown apple trees; Bartlett, Anjou and Comice pears, and other varieties of fruit trees.

A. HOLADAY

MONTE VISTA NURSERY

SCAPOOSE, OREGON



The Edgemont Lid Press

Patented Sept. 20, 1910

With Improved Stripper, New Cleat Holders and the handiest Ratchet ever put on a treadle

Price \$11.00 F.O.B. Here

Let us send you a booklet and quote price delivered on two or more presses

H. PLATT & SONS, Como, Montana

We Do Not Believe

there is any nursery, East or West, that enjoys a better reputation than ours for furnishing good, clean, healthy stock. We are willing to match our stock and service against any nursery in the world. For several years we have been supplying most of the trees planted in the famous Wenatchee Valley, and the tens of thousands of growing trees, furnished by us, speak louder than words.

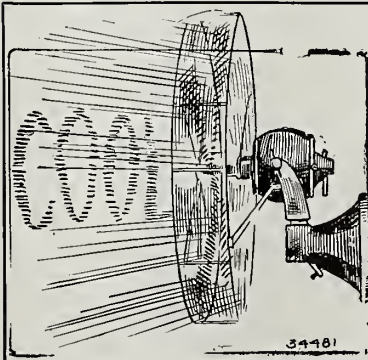
We have a large and complete line of fruit and shade trees, ornamental shrubs, vines, roses, etc.

Our Customers Get What They Order

COLUMBIA & OKANOGAN NURSERY CO.

Wholesale and Retail

Wenatchee, Washington



Estimates furnished upon request. Work guaranteed

Electric Wiring and Supply Co.

A. L. DAY, President and Manager

Everything Electrical

Engineering, House Wiring, Repairing, Contracting, Fixtures, Lamps, Motors, Heating and Cooking Apparatus.

FIRST NATIONAL BANK BUILDING

Phone 3

HOOD RIVER, OREGON



FROM ITS VERY CONCEPTION TO
THE PRESENT TIME THE

Apollo Player Piano

HAS BEEN NOTABLY IN ADVANCE OF
ALL SIMILAR INSTRUMENTS

The Genius of its Inventor Melville Clark

COMBINED with persistent and costly experiments have made the Apollo of today so individual as to be in a class by itself. If you are unable to hear an Apollo in our ware rooms, may we send a booklet which illustrates and explains the following features that are absolutely essential to the correct production of piano music. The solo theme, the downward touch, the metronome motor, all of which are exclusive to the Apollo.

For catalogue, prices, terms, etc., address

Sherman  **Clay & Co.**

Morrison at Sixth

PORTLAND, OREGON

The Social Hygiene Society of Portland

*Affiliated with THE STATE BOARD OF HEALTH, offers to parents
free of charge the following circulars on*

SEX HYGIENE

- CIRCULAR No. 1—The Need for Education in Sexual Hygiene.
- CIRCULAR No. 2—"The Four Sex Lies."
- CIRCULAR No. 3—When and How to Tell the Children.
- CIRCULAR No. 4—A Plain Talk with Girls About Their Health and Physical Development.
- CIRCULAR No. 5—Books for Use in the Family on Sex Education.
- CIRCULAR No. 7—A Plain Talk with Younger Boys (boys 9 to 13).
- CIRCULAR No. 8—A Plain Talk with Older Boys (boys 13 to 18).
- CIRCULAR No. 9—Sex Hygiene for Young Men.
- CIRCULAR No. 10—Sex Hygiene for Young Women.

Order carefully by number and enclose 2-cent stamp for postage

The Society also recommends and offers for sale the following books:

From Youth Into Manhood (for boys 13 to 18), postpaid...\$0.55	The Renewal of Life (for parents), postpaid.....\$1.35
The Young Man's Problem (for young men), postpaid......12	The Boy Problem (for parents), postpaid......12

ADDRESS DEPARTMENT D **THE SOCIAL HYGIENE SOCIETY OF PORTLAND, OREGON, 306 Y. M. C. A. BUILDING**

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

about fifteen minutes. This solution is then used to slake three or four pounds of best stone lime. If the slaking is thoroughly done the arsenic will be well combined with the lime and the product will retain its strength indefinitely. After slaking add enough water to bring the total up to two gallons. This is a stock solution which, after having been labeled to indicate its poisonous nature, may be stored for use as needed. The stock solution, after thorough stirring, is used at the rate of two pints for each fifty gallons of lime-sulphur spray and contains the equivalent in arsenic of one-half pound of paris green. This preparation may be used equally well in bordeaux mixture. Paris green may be used in bordeaux mixture at the rate of five or six ounces for each fifty gallons of spray. This poison, however, should not be used in lime-sulphur spray.

Schedule of Spray Applications.—In connection with the several insects and diseases previously referred to information has been given as to the treatment to be employed in their control. It rarely happens, however, that the orchardist has to consider only one or two of these troubles, there being present as a rule several important insect or fungus pests which must be considered. Fortunately for the orchardist many of his most serious troubles permit of control by a few well-timed applications of a combined insecticide and fungicide, such as lime-sulphur wash and arsenate of lead. It is therefore possible to indicate a schedule of applications which has been found satisfactory to protect fruit and foliage from injury. An outline of this kind, however, must be very elastic to apply to the varied conditions obtaining in the various orchard sections of different parts of the country, as, for instance, in the New England States and in the Ozark region of Arkansas. The orchardist, therefore, must know what his troubles are in order to save himself the expense of unnecessary treatments, on the one hand, and of serious loss on the other, on account of failure to spray where such work is desirable. The following schedule of applications is recommended, and if carefully followed out it should insure protection against practically all of the troubles affecting the fruit and foliage of the apple:

First Application.—Use lime-sulphur solution at the rate of one and one-half gallons to fifty gallons of water, plus two pounds of arsenate of lead paste or one pound of powdered arsenate of lead, just before the blossoms open. This is for apple scab, the plum curculio, cankerworms, the bud moth, case-bearers and the tent caterpillar.

Second Application.—Use same spray as in first application as soon as the blossoms have fallen. This is for the above mentioned troubles as well as for the codling moth, leaf-spot and cedar rust. It is the most important application for both apple scab and the codling moth. In spraying for the codling moth at this time the aim is to place in the calyx end of each little apple a

quantity of the poison, and to accomplish this painstaking work will be necessary. Failure to do thorough spraying at this time cannot be remedied by subsequent treatments.

Third Application.—Use the same spray as indicated above three to four weeks after the blossoms fall. This is the second treatment for the codling moth, cedar rust and leaf-spot and gives further protection against apple scab.

Fourth Application.—Use bordeaux mixture (3-4-50 formula) and an arsenical eight to nine weeks after the petals fall (about June 25 to 30). This is the first application for bitter rot, the arsenical being added for the second brood of the codling moth. It is also essential for the sooty blotch and flyspeck, especially in very damp situations.

The applications given above, if carefully followed out, are as a rule sufficient to bring the fruit crop through to maturity in good condition, except where bitter rot occurs, for which further treatment will be necessary, as indicated below.

Fifth Application.—Use the bordeaux mixture from two to three weeks after the fourth application. This is the second application for bitter rot, and since it is very little extra expense to add an arsenical this may be profitably done as a further protection against late-appearing larvæ of the codling moth.

Sixth Application.—Use the bordeaux mixture again two or three weeks after the fifth treatment has been applied. This is the third application for bitter rot and is ordinarily sufficient to carry the fruit through, but on specially susceptible varieties in bitter-rot sections a treatment to be made two weeks later may be found necessary.

Apple-Blotch Treatment.—The second, third and fourth applications of the above schedule will control mild cases of apple blotch, but in bad cases an extra treatment, using bordeaux mixture, applied six weeks after the petals have fallen (two or three weeks after the second application), will be found necessary for the best results.

Many orchards located in the Middle Atlantic States and southward do not require the first application of the above schedule. Only bad-seabbing varieties like Winesap need spraying at this time, unless cankerworms or the bud moth should prove serious enough to necessitate a special spraying. The York Imperial and Ben Davis varieties, which constitute a large proportion of the orchards throughout this region, rarely need spraying before the trees bloom.

Equipment for Spraying.—With other conditions favorable, the orchardist will not be able to secure satisfactory results in spraying unless he uses an efficient spraying outfit. While there has been a notable improvement in the character of spraying machinery used by orchardists during the last few years there are yet many outfits in use which greatly handicap the work. At the present time there are on the market a large series of makes of spray

Stanley-Smith Lumber Co.

HOOD RIVER, OREGON

WHOLESALE AND RETAIL

Lath, Shingles, Moulding and Slab Wood

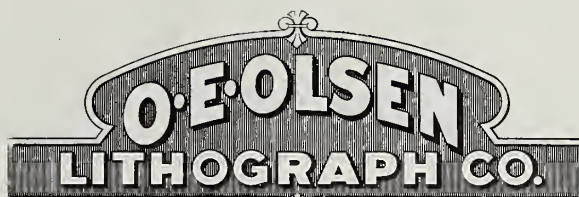
Berry Crates and Fruit Packages of all kinds

Apple Boxes—California and Oregon sizes

Idaho Pine Makes the Best Fruit Boxes

MANUFACTURED BY THE

LEWISTON BOX CO., Lewiston, Idaho



FRUIT LABELS

FOR BOXES, CANS, BOTTLES, ETC.

STOCK AND SPECIAL TRADE MARK DESIGNS

330 JACKSON ST.

COR. BATTERY ST.

SAN FRANCISCO.



CONTRACTORS FOR FENCE CONSTRUCTION

THOS. C. SOURBEER, Manager

224-225 Lumber Exchange

Main 5645

We Fence Anything from a
Lawn to a Railroad

**NATIONAL
RABBIT-TIGHT FENCE**
TURNS THE RABBITS

PORTLAND, OREGON



Before

SO-BOS-SO

Costs less than ½ cent
a day per head. Ap-
plied in a few seconds
with a cloth, sponge or
hand-sprayer.



After

Protect Your Stock from the Flies

Cows will give one-third more milk; horses will do more and better work on less feed when So-Bos-So is used. Put up in 1-Gallon sealed cans only. **Price \$1.25.** We have tried them all and offer So-Bos-So as the Best Fly Killer.

Two Letters Picked at Random From Our Testimonials:

Gentlemen—This is the first summer I ever used "So-Bos-So" and don't ever intend to be without it again. Orient, Wn., 7-24-11

MRS. E. T. AHALT

Felton, Calif., Aug. 3, 1911

The "So-Bos-So" purchased of you some time ago, cannot be spoken of in terms of too much praise. It absolutely insures the cow against trouble from any kind of fly, keeps her skin in healthy condition and makes her contented and happy, and thus, of course, increases the milk flow. If you desire to use my name you may do so. I shall recommend it at every opportunity. D. B. BOWMAN

Full Information and Free Booklet 206 on request.

PORTLAND SEED CO. PORTLAND, OREGON



The Kimball Cultivator

BEST IMPLEMENT FOR ORCHARD CULTIVATION



Kimball Cultivator at Work in Orchard at Morrisania

For maintaining a dust mulch in an orchard and for keeping down weeds the Kimball Cultivator is without an equal. Its blades cut about three to four inches under the surface of the soil, pulverizing the soil and leaving it level; all weeds are cut and germination of weed seeds prevented by leaving the soil in loose condition.

The Kimball Cultivator works well out from the horses, and soil can be stirred close to trunks of trees, with horses walking out in the open. The Kimball takes a wide sweep at a time, and eight to ten acres of orchard can be cultivated per day. Thousands of Kimball Cultivators are now in use, and every person who has one recommends it. Mr. Irvine, editor of *The Fruit-Grower*, used two Kimball Cultivators at Morrisania last season; ask him what he thinks of them. Ask him also if the Kimball is not an ideal cultivator for any part of the country; he will tell you it is an ideal soil-stirring implement.

Clean Cultivation of Orchards Pays

It not only conserves moisture, but destroys the hiding places of insects, such as cures, which are often serious orchard pests. Apples grown in cultivated orchards ripen later and consequently keep longer; they are of larger size and are usually smoother. The cost of cultivation is not excessive if Kimball Cultivators are used. Send for free booklet describing this great orchard implement—it's free for the asking.

W. A. JOHNSTON, Manufacturer
THE DALLES, OREGON

pumps, many of which are quite efficient for the purpose for which they are designed, and the orchardist should not be satisfied with any but the best. The barrel type of spray pump is serviceable in the small to medium sized orchards, and when properly fitted with hose of sufficient length, a good agitator and good nozzle very effective work may be done. The pump, according to design, may be fitted to the end or side of the ordinary fifty-gallon kerosene or similar barrel, and may be mounted on a sled or wheels, or, preferably, placed in a cart or wagon. One man is required to pump and one or two men to handle the nozzles, depending on whether one or two leads of hose are used. A good barrel pump should supply two leads of hose, each with double nozzles. Tank outfits are mostly used in the larger orchards, but are very desirable for the small orchardist as well. These outfits consist of rectangular or half-round tanks, flat on top, holding from one hundred to three hundred gallons of the spray mixture, fitted to the wagon in place of the wagon bed. Some growers use a one hundred to two hundred-gallon tank, placed on one end of the wagon. The barrel type of pump may be used on these tanks, but for this purpose it is better to use the larger tank pumps with suction hose. The hole in the top of the tank should be covered with a close-fitting lid to keep out leaves, twigs and other trash which would clog the pump and nozzles. However, in large commercial orchards power sprayers are mostly used, such as gasoline, compressed air, etc. With such outfits a much higher pressure may be maintained than is possible with hand pumps, giving a fine spray, which may be driven to all parts of the tree. Sufficient power will be furnished to supply several leads of hose and the spraying may be done rapidly, which is very important, especially in regions where suitable days for spraying are not frequent. The usual defect in spraying outfits is that the hose is not of sufficient length. Each lead of hose should be from twenty-five to thirty-five feet long and be provided with an eight-foot to twelve-foot bamboo extension rod. This length of hose will permit the complete spraying of a tree before leaving it, insuring more thorough work than if only one side is sprayed at a time, and the amount of driving necessary will be reduced by one-half. The nozzle, of which there are many kinds on the market, is a very essential part of the spraying outfit. Whereas a few years ago the nozzles available were far from satisfactory for orchard spraying, there are now to be obtained good nozzles for the purpose. For general spraying the Vermorel or eddy chamber type of nozzle, of which there are various modifications, is best. These nozzles give a spray of different degrees of fineness, depending upon the size of the aperture of the cap used. In the spray application given immediately after the falling of the petals, especially to lodge poison in the calyx cups for the control of the codling moth, a cap

with a large opening is used by many orchardists, and some fruitgrowers, especially in portions of the West, use at this time a still coarser spray, as that from the "Bordeaux" or similar nozzles. Information on this point, as obtained by the Department of Agriculture under humid conditions, indicates that there is no advantage in using so coarse a spray, such as is produced by Bordeaux nozzles, especially since a much larger amount of spray is required and greater injury may result. In spraying high trees some form of elevated platform should be constructed on the wagon, on which one of the men holding the nozzles may stand to spray the higher parts of the tree, the other men spraying from the ground as high as may be reached and overlapping the work of the men on the tower. In many commercial orchards more time is consumed in driving to and from the water supply than in actually applying the spray. This can be remedied by the use of a supply tank which will hold two hundred to three hundred gallons. One hand should be able to prepare the mixtures and deliver them to the sprayers in the orchard, thus keeping the outfit constantly in operation. The mixture may be quickly transferred from the supply tank by means of a rotary pump attached to the engines or by other tank-filling devices.

Sprays are preventive and not curative, and must therefore be applied before the injury becomes apparent. After a fungus has gained entrance to the foliage or fruit it cannot be reached and the diseased parts made sound again, but the infection may be prevented by coating the parts with a fungicide, such as lime-sulphur solution, which prevents the germination of the spores. Similarly, the codling moth may not be poisoned after it has burrowed into the fruit, but if the poison has been put into the calyx cavities before the calyx lobes have closed and has been sprayed on the foliage and fruit before the latter is entered by the larvae, the destruction of the latter in large numbers is insured. Successful spraying, therefore, must be based on a knowledge of the diseases and insects to be controlled. With all of the affections here considered the work should be done in advance of their expected appearance in the orchard. There are two principal reasons why spraying in the hands of some is unsatisfactory, namely, failure to make the applications at the proper time and failure to thoroughly coat the trees and fruit with the mixture. In order to overcome the former difficulty the orchardist must be informed as to the nature of the malady or insect to be treated, and the latter may be overcome by maintaining proper equipment and by giving the necessary attention to thoroughness in spraying. In the operation of spraying the liquid should be broken into a very fine mist. The nozzles should be so manipulated that every part of the foliage and fruit shall be uniformly covered with fine dots of the spray. It is not necessary that the foliage and fruit should be actually coated

SHIPPERS, COMMISSION MERCHANTS GET TOGETHER!

The object of the Produce Reporter Organization is to unite shippers and receivers in a trading system that insures, first, a mutual understanding as to grades and trading terms. Second, that arranges for quick and immediate adjustment or arbitration of any differences that may arise.

It is not a shippers' organization to "sandbag" receivers and commission merchants, nor is it designed to enable commission merchants to successfully evade their contracts on arrival of the goods. Quite to the contrary—it insists on one standard of business ethics for both. It recognizes the fact that most of the misunderstandings in the business arise from failing to agree in advance as to grade terms—how the goods shall be packed—as to shipping terms—what is meant by "quick," "prompt" and "immediate" shipment—and as to responsibility for loss from deterioration or delay of the goods en route, etc., etc.

Just thirteen years ago this Organization was formed and since then it has steadily progressed along the lines indicated until today it is the recognized credit authority and most powerful trade organization in existence. Its ideas of a square deal are commendable. It settles disputed matters without fear or favor, either as to whether the complainant is a shipper or receiver, and further with equal fairness whether the complainant is a member or non-member. Keep these facts well in mind—they are fundamental—they are the basis of our success, which is generally acknowledged even by those who fear the power of the Organization.

The Credit Book annually, supplemented by credit sheets weekly and special reports whenever asked for, contain the most valuable information that can be secured by handlers of produce and fruit. The Adjusting, Inspecting, Collecting, Arbitration, Law, and Railroad Claim Departments should not be overlooked. With general offices in Chicago and New York, which look after the adjusters in their territory, it is possible upon wire notice to get a qualified inspection and adjustment report upon goods no matter where they may be.

Every subscriber has access to these different departments and the service sold and price charged therefor is adapted to the requirements of small, medium or large dealers—shippers, receivers, brokers and commission merchants everywhere in the United States. Write for further particulars to the nearest office.

PRODUCE REPORTER COMPANY OGDEN BUILDING, CHICAGO
FRUIT AUCTION BUILDING, NEW YORK CITY

SEEDS

THE KIND YOU CAN'T KEEP IN THE GROUND

They grow, and are true to name
Write for prices on your wants

188 Front Street **J. J. BUTZER** Portland, Oregon
Poultry Supplies, Spray, Spray Materials, Fruit Trees, Etc.

A Book About the Country in Oregon and Washington Recently Opened

by the building of

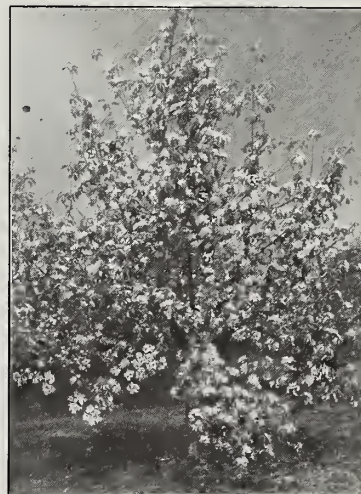


and

Oregon Trunk Ry.

will be mailed on receipt of request. It outlines the resources of the fruit, grain, dairy and garden districts of this country in a conservative manner.

Non-irrigated and irrigated districts are reached by these lines and this book will be interesting to those seeking a new location.



W. E. COMAN

General Freight and Passenger Agent, S. P. & S. and O. T. Rys.
PORTLAND, OREGON

Printing

We invite inquiries from all Nurserymen, Fruit Growers and Manufacturers who are contemplating the issuing of

Catalogs Advertising Matter

or Printing of any kind. We make a specialty of out-of-town orders and handle them with a facility unequalled anywhere. Our thorough equipment makes possible a high quality of work at a low cost. Send us specifications of your work and we will give estimate by return mail. You will find us prompt, accurate and equal to anything in the production of GOOD Printing. *Better Fruit* is printed in our shop. Its beautiful appearance bears testimony to our skill.

F.W. BALTES & COMPANY

FIRST AND OAK STREETS
PORTLAND, OREGON



LINDSAY & CO. Ltd. Wholesale Fruits

HELENA, MONTANA

Established in Helena a Quarter Century

Branch houses: Great Falls, Missoula and Billings, Montana

with the spray, but every portion should be thickly peppered with it. The higher and inner portions of the tree are commonly insufficiently sprayed, and while the liquid may actually be dripping from the lower branches the upper parts of the tree may show little of the spray. The desired mist-like spray can ordinarily be secured only with high pressure at the pump. This pressure should be not less than one hundred pounds, though this is not ordinarily obtained except with gasoline or other power outfits, which should supply a pressure of one hundred and twenty-five to one hundred and fifty pounds. When hand pumps are used the pressure should be maintained as high as practicable, and never less than seventy-five pounds, in which case good nozzles become more essential for perfect work. To maintain this pressure will require constant hard work, and the tendency will be to allow the pressure to lighten. Except in spraying the tops of trees the nozzlemen should never ride on the wagon, even while spraying the smallest trees. In order to reach the inner branches and the under side of the fruit and foliage the operator must spray from the ground, where he is free to walk around and under the trees. Many failures result from attempts to spray trees from the wagons as the outfit is being driven by. The question is frequently asked, especially by persons not much experienced in spraying, as to the proper quantity of spray that is required per tree. This information is not only an index to the thoroughness of the spraying that is being done but is especially useful in arriving at an estimate of the amount of spray chemicals to be purchased. The quantity of liquid to be used on trees and foliage naturally varies with the size of the tree. For orchards just coming into bearing and with average sized trees eight to ten years old, a proper manipulation of the nozzle should insure thorough spraying with three or four gallons per tree. For average sized trees twelve to fifteen years old the amount of spray required per tree would be from five to seven gallons, and for older trees a larger quantity will be required, all varying with the size of the opening in the nozzle used and the rapidity with which the work is done. Very old trees of considerable height and spread of limbs often require from ten to fifteen gallons per tree to insure a thorough treatment.

Editor Better Fruit:

I am greatly pleased with the copy of December. The special articles on planting and pruning are high class, and the whole magazine is beautifully gotten up. Yours truly, Fitz. W. A. Scott, Carrigerry, Ireland.

CHEEK-TO-CHEEK GRADING



EVENTUALLY YOU WILL WANT OUR ADDRESS
SCHLENGER FRUIT GRADING MACHINE CO.
OGDEN, UTAH.

The Genuine DOMESTIC
Now \$2 A MONTH



You can place the latest model, genuine Domestic, the recognized queen of all sewing machines, in your home, use it continually while paying \$2 a month, and enjoy a very special price direct to you or from our nearest agent. A magnificent machine—a stupendous offer.

We Will Take Your Old Machine if you wish and make a liberal allowance on a splendid new Domestic. And you can still take advantage of the special price and easy terms.

DOMESTIC

The perfect sewing machine that has always led all other makes and is today **better than ever**. Two machines in one—lock stitch and chain stitch. Straight drop-head, high arm, ball bearing. A complete set of attachments—every one practical, etc., made for every-day use. The Domestic is a revelation of modern sewing machine progress. Find out about it. **SEND FOR BOOK, FREE, The Truth About Sewing Machines.** Telling you how you can have the finest sewing machine made at a Special Low Price and at ONLY \$2 a month. Learn why we sell direct, where we have no agent and give you a 25 YEAR GUARANTEE. Get the facts before you buy any machine. This Free Literature will save you money. Send for it NOW.
Domestic Sewing Machine Co., 49 Jackson Blvd., Dept. 414 Chicago.

Use KEROSENE Engine Free!



Amazing "DETROIT" Kerosene Engine shipped on 15 days' FREE Trial, proves kerosene cheapest, safest, most powerful fuel. If satisfied, pay lowest price ever given on reliable farm engine; if not, pay nothing. No waste, no evaporation, no explosion from coal oil.

Gasoline Going Up!

Gasoline is 9c to 15c higher than coal oil. Still going up. Two pints of coal oil do work of three pints gasoline.

Amazing "DETROIT"

—only engine running on coal oil successfully uses alcohol, gasoline and benzine, too. Starts without cranking. Only three moving parts—no cams—no sprockets—no gears—no valves—the utmost in simplicity, power and strength. Mounted on skids. All sizes, 2 to 20 h. p., in stock ready to ship. Engine tested before crating. Comes all ready to run. Pumps, saws, threshes, churns, separates milk, grinds feed, shells corn, runs home electric lighting plant. Prices (stripped), \$29.50 up. Sent any place on 15 days' Free Trial. Don't buy an engine till you investigate money-saving, power-saving "DETROIT." Thousands in use. Costs only postal to find out. If you are first in your neighborhood to write, you get Special Extra-Low Introductory price. Write at once.

Detroit Engine Works, 507 Bellevue Ave., Detroit, Mich.

Sandow \$42.50

2½ H. P. Stationary Engine — Complete



Gives ample power for all farm uses. Only three moving parts—no cams, no gears, no valves—can't get out of order. Perfect governor—ideal cooling system. Uses kerosene (coal oil, gasoline, alcohol, distillate or gas). Sold on 15 days' trial. **YOUR MONEY BACK IF YOU ARE NOT SATISFIED.**

5-year ironclad guarantee. Sizes 2½ to 20 H. P., at proportionate prices, in stock, ready to ship. Postal brings full particulars free. Write for proposition on first-class engine in your locality. (163)

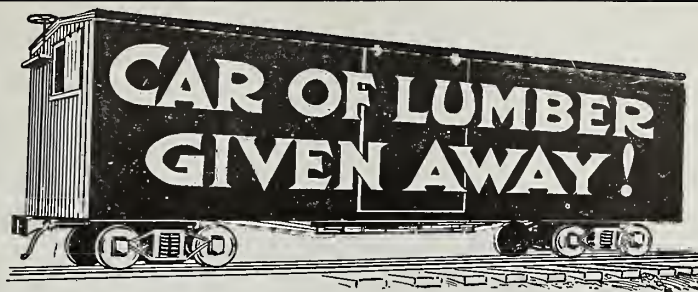
SANDOW KEROSENE ENGINE
Detroit Motor Car Supply Co., 238 Canton Ave., Detroit, Mich.

Water



Pump it automatically with a Phillips Ram. No attention. No cost of operation. Let us tell you about it.

The Phillips Hydraulic Ram Company
432 Lumber Exchange Bldg.
Portland, Oregon



To the Person Submitting the Best House Plan

READ THE CONDITIONS CAREFULLY

FOR the purpose of securing the best house plans of practical builders in all sections of the country, we will give away a whole carload of lumber—sufficient for the building of a house. The shipment will include common lumber, flooring, ceiling, siding, framing timbers, shingles—anything that the prize winner desires.

This extraordinary prize goes to the person who submits to us before August 1, the best plan for either a farm house or a town house. Every builder in the country has some favorite plan. You undoubtedly have yours. Send it in. It may win the prize. It doesn't matter so much about the form in which it is submitted. Mail either a blue print or a rough sketch, and, if possible, send us a photograph of one of the houses you have built according to the plan. Accompany plans with list of material used in construction. Enclose stamps if you desire plans returned.

The prize car will be made up of some of the best fir and cedar lumber ever turned out of our Northwestern mills. You know the lasting qualities of fir and cedar. Therefore you can appreciate what this offer means.

All plans will be passed on by a board of judges consisting of two carpenter contractors, one draftsman and two practical men engaged in the building material business. After the prize winner has been selected, forty others will be chosen as deserving honorable mention. To each of these we will give a coupon entitling him to a 10 per cent discount from our regular rock-bottom prices on the first bill of lumber ordered from us.

This means a big saving, when it is considered that our regular prices are manufacturer's prices. We sell direct from our mills, enabling you to eliminate all middlemen.

Remember, the contest closes August 1st. All plans must reach us before that date to receive consideration. Send yours in as soon as possible. Send for detailed information about the contest.

Mail coupon now.

COUPON
HEWITT-LEA-FUNCK CO.
625 First Ave.,
Seattle, Wash.

I would like to enter your house-plan contest for the prize car of lumber. Send full particulars.

Name

Address

Occupation

Hewitt-Lea-Funck Co.
HIGH IN QUALITY LOW IN PRICE
FIRST IN SHIPMENT
625 First Ave. Seattle, Wash.

As Viewed from the Nation's Capital

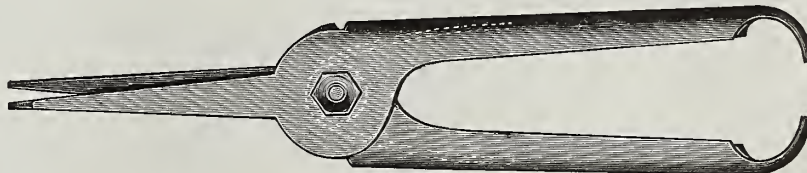
By Francis John Dyer, Washington, D. C.

THROUGH the passage of the enlarged homestead bill, the three-year homestead bill and other measures which have for their purpose more liberal treatment of citizens who desire to secure a home on the public domain, it is believed that the tide of emigration to Canada will be somewhat checked. In all of the public land states there has been dissatisfaction for a number of years over the manner in which the public land laws have been administered. It has seemed as if the intent had been to harass the settler to such an extent that he would abandon his claim and let it revert to its original condition. Then came the cult of the conservationist, who sought to prevent the passing of title to individuals or corporations altogether, and who wanted and still wants to create a vast rent roll for the government, the idea seemingly being to give a bureaucracy control and to extend its power and authority. Now there is a very natural reaction. The government having disposed of its choicest public lands, it becomes necessary to make more reasonable regulations in order to induce the masses to get "back to the land." Encouragement for the farmer is also coming about as a result of the extensive work of the Agricultural Department at Washington and the activities of its trained scientists who are work-

ing in all portions of the country to help solve the problems of the farmer and fruitgrower. Beside all this, congress is beginning to look with a more kindly eye on the need of extending such protection as is afforded by the tariff to farmers. At one time the latter seemed to be without the pale. Now the farmer, who made his voice heard when the Canadian reciprocity treaty was under discussion, has compelled the country to notice him, and in the future he will find little trouble in getting congress to listen to his petitions.

Every person of mature years can remember when it was questioned

whether fruit could be raised in many localities where it is now staple—for instance, in Kansas, Nebraska and most of the Western States. Probably the same doubt once existed as to the suitability of New York for fruit growing—yet Western New York is said to be the greatest apple region in the world; as to New Jersey and Delaware, where peaches and other fruit are now so profitable; as to the entire Western Reserve, most of which is so valuable for farming and fruit growing that the prices paid for farming lands would seem fabulous to those pioneers who burned up the black walnut trees to make room for their corn patches. The same doubts existed regarding Washington and Oregon, now famed the



Fruit Thinning Shears Improved Pattern

LET US BOOK YOUR ORDERS NOW TO INSURE PROMPT DELIVERY

40 cents each, \$3.90 per dozen, postpaid

E. A. FRANZ CO., HOOD RIVER, OREGON

world over for their apples, prunes, pears and walnuts, and California, famed for her raisins, oranges and lemons. Regarding the latter especially—lemons—it was many years before the growers, at much cost of time and money, learned what varieties to plant, how to cultivate them, more especially how to cure them for market (for the lemon, like the pear, must be picked green and cured, always being handled literally with gloves, or "like eggs," as the saying goes) and how to ship them. Then it was found that the fruit could be imported more cheaply than the home producer could grow it. Finally the tariff helped that, and in time it is predicted the State of California alone will be able to supply all of the lemons consumed in the United States, "and then some," and that the price will go so low—it is now dropping—that the foreigner will not find this market tempting except to unload his surplus on it.

Advertising is an art that has grown but slowly. Some of the old files of newspapers that are kept stored away

in the congressional library are of the greatest interest because they give, as nothing else can, certain aspects of the times in which they were printed. The House Beautiful has found in one of these old newspapers some quaint little advertisements, and among them is one of the little shop where lemons were sold in Boston by John Crosby. He called it "The Basket of Lemons." This was away back in 1769, and citizen Crosby modestly asserted that his lemons were "as large, in general, as lemons commonly are," and that they were sold "at £4 per hundred, or ten shillings per dozen." That would be from ten to twenty times the present cost. And yet one of the free trade advocates in congress had the assurance last year to charge publicly that the high cost of living was due to the tariff on lemons. As to Mr. John Crosby's enterprise in running a five or six line advertisement in 1769, what would he think now to see the growers of oranges and lemons in California spending \$150,000 in a single year and the growers in Florida making an expenditure proportionately

We are now selling tracts of 5 acres or more in our final and greatest planting at Dufur, Wasco County, Oregon.

5,000 ACRES All in Apples

Over 3,000 acres of it has gone, mostly to Eastern people. The remainder will be gone by spring.

We plant and develop for five years, guaranteeing to turn over to you a full set, perfectly conditioned commercial orchard. At the expiration of the five years we will continue the care of your orchard for you, if desired, for actual cost, plus 10 per cent.

Planting and care is under supervision of the

Churchill-Matthews Company

Spalding Building, Portland, Oregon

The largest and most experienced planters in the Pacific Northwest

We will be glad to meet personally, or to hear by mail, from anyone considering the purchase of an apple orchard or apple land. On account of the bigness of the project, everything is done on a wholesale basis and prices for our tracts are proportionately lower. Reasonable terms. All our purchasers are high class people. No others wanted.

Write for booklet, or call on

DUFUR ORCHARD COMPANY

Suite 510 Spalding Building
Portland, Oregon

Suite 2013 Fisher Bldg., Chicago, Illinois

New Residents

We are always pleased to extend courteous assistance to new residents of Hood River and the Hood River Valley by advising them regarding any local conditions within our knowledge, and we afford every convenience for the transaction of their financial matters. New accounts are respectfully and cordially invited, and we guarantee satisfaction. Savings department in connection.

Hood River Banking and Trust Company

HOOD RIVER, OREGON

The First National Bank

Hood River, Oregon

F. S. STANLEY, President
J. W. HINRICHS, Vice President
E. O. BLANCHARD, Cashier
V. C. BROCK, Assistant Cashier

Savings Department
Safety Deposit Boxes

Capital and Surplus, \$127,000
Total Assets over \$600,000

LESLIE BUTLER, President
TRUMAN BUTLER, Vice President
C. H. VAUGHAN, Cashier

Established 1900

Butler Banking Company

HOOD RIVER, OREGON

Capital fully paid - - - \$100,000

INTEREST PAID ON TIME DEPOSITS

We give special attention to Good Farm Loans

If you have money to loan we will find you good real estate security, or if you want to borrow we can place your application in good hands, and we make no charge for this service.

THE OLDEST BANK IN HOOD RIVER VALLEY

LADD & TILTON BANK

Established 1859

Oldest bank on the Pacific Coast

PORTLAND, OREGON

Capital fully paid - - - \$1,000,000
Surplus and undivided profits - - - 800,000

Officers

W. M. Ladd, President
Edward Cookingham, Vice President
W. H. Duncley, Cashier

R. S. Howard, Jr., Assistant Cashier
J. W. Ladd, Assistant Cashier
Walter M. Cook, Assistant Cashier

INTEREST PAID ON TIME DEPOSITS AND SAVINGS ACCOUNTS

Accounts of banks, firms, corporations and individuals solicited. Travelers' checks for sale, and drafts issued available in all countries of Europe.

large, to advertise their wares, and beside that distributing to the consumers in the shape of premiums the entire product of one big silverware manufactory?

In all ages the eating of fruit has been recognized as an aid to health. Some of the more advanced dieticians advocate the use of fruit and nuts exclusively. The more reasonable plan, however, seems to be to eat "plenty of fruit," and that is the way Dr. Harvey W. Wiley, the famed pure food expert, puts it. He believes that everyone should eat fruit—say oranges or apples, and they cost about the same—every day. The nation seems to be following this advice. "It will save doctors' bills," says Dr. Wiley, and who should know better than he? But that is a fundamental fact which everyone should know from experience. It is pretty safe to say that the more fruit people eat the better the health of the nation will be.

So great is the demand for agricultural imports in this country that our sales abroad are falling off and we are importing large quantities. The recent shipments of potatoes from Ireland are fresh in everyone's mind, and we take considerable shipments from Canada and Mexico. A recent agricultural item in the consular reports states that last year 197,698 crates of tomatoes were shipped to this country from Cuba, besides 41,813 crates of okra, egg plant, peppers, etc. The farmer still has room to expand his market.

ADVERTISING THE STATE NORTHERN PACIFIC INAUGURATES BIG CAMPAIGN BOOSTING OREGON

The Northern Pacific Railway is advertising Oregon in a special list of farm and rural publications calculated to reach upward of five millions of people in the Middle West and eastern sections of the United States. Large display advertisements, a reproduction of one of which is shown herewith, will greet the eyes and invite the inquiries of these people in a compelling manner that is expected to produce big results. The advantages of the state from agricultural and industrial standpoints, and the opportunities not only for the farmer but for the business man and investor, are set forth.



Oregon

the haven of the Homeseeker

Physically the state is attractive, geographically its location is excellent, climatically it leaves nothing to be desired.

The Willamette Valley in Western Oregon, 150 miles long, contains about 5,000,000 acres of very fertile land. It is well watered, thickly settled, embraces many fine farms, has much water power, and is the oldest settled part of the state.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.

The Coast Range bordering the Columbia River, has made itself famous with pure waiving fruit.



Billingsley Box Machine Company, Ocala, Florida

The New Panel-End Box

The Washington Mill Company, of Spokane, Washington, is leading in the betterment of fruit boxes, by using the BILLINGSLEY PATENT MACHINES.

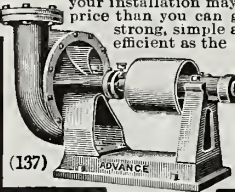
The Anaconda Copper Mining Company are installing our system at Hamilton, Montana, and will be ready for the coming fruit season.

Ask your dealer for PANEL-END BOXES, lightest, handsomest, strongest—forms a good hand-hold at both ends of box.

Substantial millmen are requested to correspond with

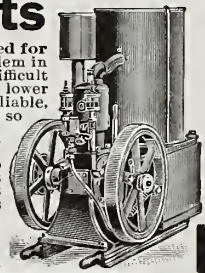
Detroit Irrigation Plants

are the best that money can buy. Sold at lower prices than are asked for inferior plants. No more irrigation troubles! We have solved the problem in a way that is at once the most satisfactory and economical. No matter how difficult your installation may be, we can fit you out with a better outfit at a lower price than you can get elsewhere. You MUST have a thoroughly reliable, strong, simple and economical engine, and there is none other so efficient as the

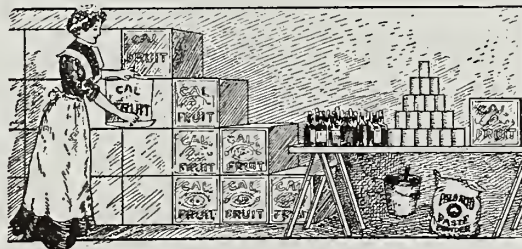


AMAZING DETROIT Kerosene Engine

in combination with just exactly the right pump adjusted and arranged in just exactly the right manner for your particular work. If you want advice as to how to proceed to get the best results with the least investment and cost of operation, write us at once, giving full and complete details, addressing your letter to our Irrigation Specialist, Detroit Engine Works, P. O. Box 506, Detroit, Mich.



Paste for Labeling—"Palo Alto" Paste Powder



added to cold water, instantly makes a beautiful, smooth, white paste. Ready for immediate use at a cost of ten cents a gallon. No labor. No muss. No spoiled paste.

Paste Specialists

Robinson Chemical Works

349-351 Eighth Street

San Francisco, California

Closest Skimming and Easiest Running

IS THE VERDICT, AFTER A THOROUGH TRIAL OF THE

SIMPLEX

By Marks Bros., Umpqua Creamery, Roseburg, Oregon

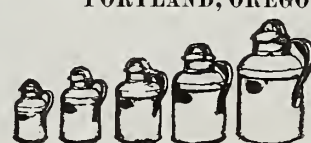
"It is without doubt the closest skimming and easiest running machine on the market. We have been running a No. 6 before we got the Simplex, and will say that the Simplex to our notion outstrips it both in skimming and easy running."

It isn't just the first cost of a machine you have to consider. Remember that every pint of cream you lose in an inferior separator adds just that much to the cost of your separator.

The Simplex saves you that much every day, and in cash, too.

The Simplex is the only machine you can afford to buy and use.

Write today for our free Illustrated Catalog No. S 28.



Northern Pacific Railway

Reproduction of large Northern Pacific advertisement on Oregon

It is said that this is the most extensive advertising campaign in the interests of Oregon ever launched by any of the transportation companies. Homeseekers' fares to all points in the state are in effect on the first and third Tuesdays of each month, and it is the expectation of Northern Pacific officials that this advertising campaign will result in investigation of Oregon's attractions by a large number of the class of people best fitted to develop the state's unoccupied and undeveloped lands.



Genasco

THE TRINIDAD-LAKE-ASPHALT
Ready Roofing

Trinidad Lake asphalt is Nature's everlasting waterproofer—and that's what Genasco is made of. Write for samples and the Genasco Book—free.

The Kant-leak Kleet, for smooth-surface roofings, prevents nail-leaks.

The Barber Asphalt Paving Company

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

Philadelphia
New York San Francisco Chicago

FRUIT Western Soft Pine Light, Strong and Durable

BOXES

"Better Fruit" subscribers demand the "BETTER BOX"

TWO CARLOADS DAILY

DISTRIBUTORS FOR

Save Time Hallocks

The best, most satisfactory folding berry box on the market. Get our prices on the Hallocks and crates complete to your station.

Washington Mill Co.

Wholesale Manufacturers
Spokane, Washington

Vehicles and Agricultural Implements

THE BEST OF
ORCHARD AND GARDEN TOOLS
A SPECIALTY

Gilbert Implement Co.

HOOD RIVER, OREGON

S. E. Bartmess

Undertaker and
Licensed Embalmer
For Oregon and Washington

Furniture, Rugs, Carpets
and Building Material

HOOD RIVER, OREGON

Just A Little Paper

Between sixty and sixty-five carloads of paper for wrapping fruit will be needed in the Yakima Valley this season if between this and the time when danger is no longer to be feared nothing intervenes to destroy the fruit crop. This is the estimate of W. E. Miller, representing the Richmond Paper Company, who has been selling paper in Eastern Washington for a great many years and who is as well posted as anyone else on the conditions and the requirements. Wenatchee and Yakima together, according to Mr. Miller, will probably require 100 to 125 cars of wrapping paper, according to all present indications.

It is figured that there is used half a pound of wrapping paper, on the average, to a box of apples, or approximately 300 pounds to a car. Stated differently, it is figured that a carload of paper will wrap 100 cars of fruit. This means that sixty cars of paper will wrap 6,000 cars of fruit, taking it for granted that they are all apples. Expressed in still another way, the wrapped fruit of this valley this year will number between three hundred million and four hundred million individual specimens, or enough for every person in the United States to get four or five specimens apiece of Yakima fruit if it is evenly distributed.

As there will be a goodly proportion of unwrapped fruit of one kind and another, the total from the 8,000 cars of fruit generally figured on will be reduced somewhat. Yet it appears that Mr. Miller has been conservative in his estimates. Mr. Miller reports that while there has been considerable buying the general feeling has been to wait awhile to ascertain just what the season will bring forth. From what he has been able to learn in the different districts the prospects are brighter than they have ever been and he anticipates a splendid crop of fruit.—Yakima (Washington) Herald.

The Oyster Shell Scale

The Division of Entomology of the State Agricultural Experiment Station at Pullman, gives the following timely information concerning this destructive pest: The oyster shell bark louse is quite a common pest throughout Western Washington and also occurs in many of the orchards in Eastern Washington, especially in those of higher altitude. The oyster shell seems to prefer an elevation of above 2,000 feet or else where considerable moisture is present, while the San Jose scale seeks the localities below 2,000 feet and where there is little moisture in the air. The oyster shell differs from the San Jose scale in its method of reproduction. There is but one generation of the oyster shell each year. In the fall, under each of the scales, you will find produced about one hundred eggs or less. These remain over winter and about the early part of June will hatch out. The young scales then crawl over the tree and locate on some suitable

LOOK FOR THREE THINGS

When buying a farm wagon there are three things to consider carefully—strength, light draft and durability. If any one of these not the most for the money you pay.



Davenport Roller Bearing Steel Wagon

Constructed entirely of steel I-beams, channels and angles, like the modern railway bridge. It is built for the heaviest lifetime service. Solidly held together with large steel rivets, put in hot under great pressure, each front and rear gear is practically one solid piece. Steel wheels are trussed and made with a tension, the strongest known wheel construction.

Roller Bearings

Roller bearings on the Davenport make it much lighter draft than the ordinary wagon. The spindles and hubs are straight and run straight ahead, along the line of least resistance.

Better Farm Implements and How to Use Them

If you have not already received your copy of this new John Deere book, ask us for it at once. It's free. It illustrates and describes the most complete line of farm implements. Tells how to use and adjust them under all conditions.

In order to be sure you'll get our Davenport Wagon book and this new John Deere book also, ask for our package No. B-46

John Deere Plow Company, Moline, Illinois

Ryan & Newton Company

Wholesale Fruits and Produce

Spokane, Washington

We have modern cold storage facilities essential for the handling of your products

Reliable Market Reports

PROMPT CASH RETURNS

Spruce Box Shooks

IN CAR LOADS

NORTHWESTERN LUMBER COMPANY

HOQUIAM, WASHINGTON

Prompt Shipments

J. F. LITTOOY

CONSULTING HORTICULTURIST

Land, irrigation and orchard schemes examined for owners, buyers, bonding companies or advertising agencies—Orchard and land values estimated—Orchard soils examined—Directs orchard development—Land damage claims estimated—All business confidential.

BOISE, IDAHO

THE REIERSON SPRAYER Saves Time, Trouble and TREES



Write for Catalogue S6
REIERSON MACHINERY CO.
182-4-6 Morrison Street, Portland, Oregon

Won blue ribbon, highest award, over all competitors at Salem Fair in 1911. Equipped with 2 1/2 H. P. 4-cycle Waterloo Gas Engine, Special latest triple spray pump. Will maintain 250 pounds pressure. There is more you ought to know. LIGHTEST, MOST COMPACT

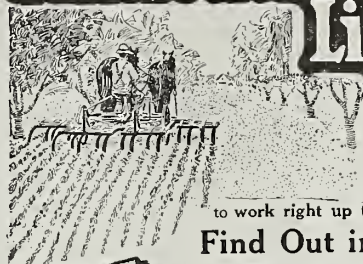
place of the bark, where they remain for the rest of their lives. With the San Jose scale as many as four hundred young are born to each mother, and there are at least ten generations in the year. It is this difference in reproductive ability that makes the San Jose scale a dreaded pest. The usual treatment for the oyster shell bark louse is to spray with the sulphur lime wash any time during the winter. This wash acts through the shell and will kill some of the eggs beneath. Sometimes, however, especially if the wash is scantily applied, it has proved quite insufficient in checking the pest. It would seem as if the old fashioned sulphur lime, containing a great excess of lime, would work better than the clear sprays now in use. The excess of lime has the effect of raising the scale on drying, and that exposes the eggs to the action of the wash and also to the action of the weather. If the eggs are not killed and the young appear in early summer a tobacco wash has given the best satisfaction. Black Leaf used 1 to 70, or Black Leaf 40 used 1 to 70 is a dependable spray. Any tobacco spray has its effect greatly increased by the addition of soap, and of the soaps those known as cresol or lysol seem best. If there are no other pests than the oyster shell, red spider and aphid present the tobacco treatment in early summer will be preferable to the winter spray of sulphur lime.—Washington State Experiment Station Bulletin.

Currants and Gooseberries

In an effort to save the currant and gooseberry industry, now almost a complete failure in some parts of the state because of a fly infesting the bushes, A. L. Lovett, of the crop pest staff, will experiment this summer with a spray which has proven effective in killing the Mediterranean fruit fly in South Africa. For three years Professor Hally has experimented with this spray in Cape Colony, and says that the fly eats it readily. It is composed of three ounces of lead arsenate to two and one-half pounds of sugar and four gallons of water, and is applied just at the time the petals fall. Mr. Lovett will apply a second spray about two weeks later. Professor Lovett will spend practically the whole of the summer on this experiment and other investigations of insect pests in the orchards and gardens in the Portland district. He went to North Albany last week to plan the summer campaign against the cabbage and raddish maggots and to investigate a report of a serious insect pest which is injuring tomato seed.

Almost the whole world knows of Hood River as a place that produces the best fruits, and all of Hood River Valley should know, and could know, that there is one place in Hood River, under the firm name of R. B. Bragg & Co., where the people can depend on getting most reliable dry goods, clothing, shoes and groceries at the most reasonable prices that are possible. Try it.

Find Out About the Forkner Light-Draft Harrow!



THIS low-priced harrow for orchards and vineyards—and general use—is a world-beater. Wonderfully light of draft—weight carried on wheels, not on horses' necks. Great worker—20 to 30 acres a day with one team—and every inch of soil cultivated thoroughly—lifted and turned in long wavy level. Best of all—it hangs low and has great extension—making it a snap

to work right up to trees without horse or driver disturbing boughs or fruit.

Find Out in Your Orchard—At Our Risk!

WRITE TODAY for catalog and 30 day trial offer. Pick the machine suited to your soil and orchard and use it for a

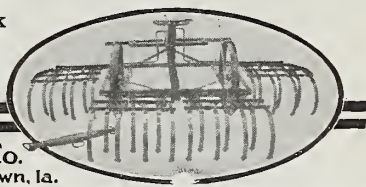
month—and send it back if you don't find it the finest cultivator made.

Send for This Free Book

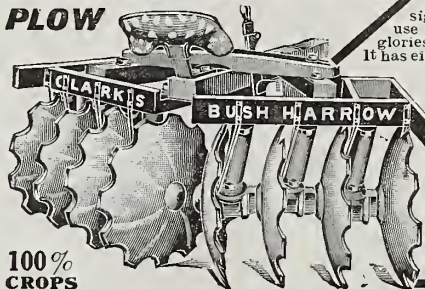
"Modern Orchard Tillage"—written by highly successful orchardist—contains information that may be worth hundreds of dollars to you. Sent for the asking.



Light Draft Harrow Co.
901 E. Nevada St. Marshalltown, Ia.



CLARK'S REVERSIBLE CUTAWAY BUSH AND BOG PLOW



100% CROPS

This machine is built especially to subdue newly cleared timber land and bogs to a seed-bed fit for a garden. Twenty-five years of experience has taught us how to build this machine right. It is designed for efficiency, strength, and durability. Its use means destruction to bushes, bunch grass, morning glories, or any wild plant that is preventing best cultivation. It has eight 24-inch "Cutaway" cutlery steel disks, which cut a strip 5 ft. wide and 9 inches deep. It will throw the soil to or from the center, leaving the land level.

This tool makes money for the owner every year, and its life is indefinite.

Shipping weight, 625 lbs.

Write today for free booklet

"Intensive Cultivation." It

fully describes our complete

line of tools for every crop.

Cutaway Harrow Co.

940 Main St.

HIGGANUM, - CONN.



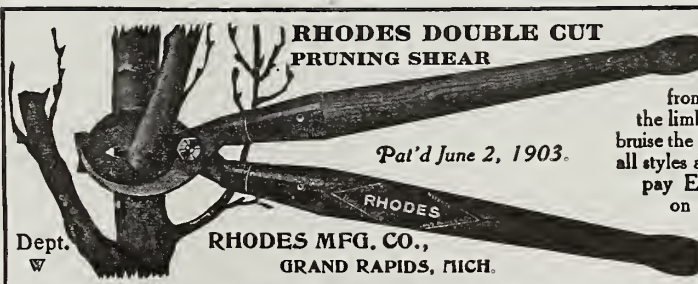
MITCHELL, LEWIS & STAVER CO., Western Agents, Portland, Oregon

Nursery Catalog NEW, HANDSOME, INSTRUCTIVE, UP-TO-DATE

Describing Fruit and Ornamental Trees, Shrubs, Vines, Roses, Berry Plants, etc.

Free on request. Write now, mentioning this paper

J. B. PILKINGTON, NURSEYMAN, PORTLAND, OREGON



RHODES DOUBLE CUT PRUNING SHEAR

Pat'd June 2, 1903.

RHODES MFG. CO.,
GRAND RAPIDS, MICH.

THE only

pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders.

Write for circular and prices.



WANTED—RIDER AGENTS

IN EACH TOWN

and district to ride and exhibit a sample 1912 Model "Ranger" bicycle furnished by us. Our agents everywhere are making money fast. Write at once for full particulars and special offer.

NO MONEY REQUIRED until you receive and approve of your bicycle. We ship to anyone, anywhere in the U. S. without a cent deposit in advance, *prepay freight*, and allow **TEN DAYS' FREE TRIAL** during which time you may ride the bicycle and put it to any test you wish. If you are then not perfectly satisfied or do not wish to keep the bicycle you may ship it back to us at our expense and you will not be out one cent.

LOW FACTORY PRICES We furnish the highest grade bicycles it is possible to make at one small profit above actual factory cost. You save \$10 to \$25 middlemen's profits by buying direct of us and have the manufacturer's guarantee behind your bicycle. **DO NOT BUY** a bicycle or a pair of tires from anyone at any price until you receive our catalogues and learn our unheard of factory prices and remarkable special offer.

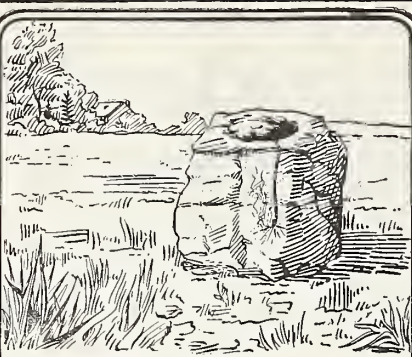
YOU WILL BE ASTONISHED when you receive our beautiful catalogue and study can make you. We sell the highest grade bicycles at lower prices than any other factory. We are satisfied with \$1.00 profit above factory cost. **BICYCLE DEALERS**, you can sell our bicycles under your own name plate at double our prices. Orders filled the day received.

SECOND HAND BICYCLES—a limited number taken in trade by our Chicago retail stores will be closed out at once, at \$3 to \$8 each. Descriptive bargain list mailed free.

TIRES, COASTER BRAKE rear wheels, inner tubes, lamps, cyclometers, parts, repairs and everything in the bicycle line at half usual prices.

DO NOT WAIT—but write today for our Large Catalogue beautifully illustrated and containing a great fund of interesting matter and useful information. It only costs a postal to get everything. Write it now.

MEAD CYCLE CO. Dept. L345 CHICAGO, ILL.



A Mud-Capped Charge

Clear the Farm of Boulders

WITH

DU PONT

Red Cross Dynamite

Boulders take up much valuable space, and cause waste of work in plowing around.

Dynamite instantly smashes the biggest boulder into easily handled pieces.

Booklet Free

To learn how progressive farmers are using dynamite for removing stumps and boulders, planting and cultivating fruit trees, regenerating barren soil, ditching, draining, excavating, and road-making, write now for Free Booklet—"Farming with Dynamite, No. 338

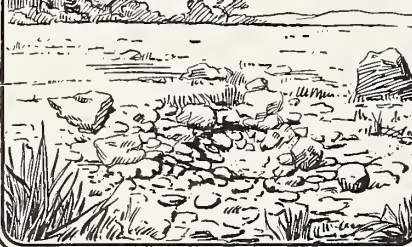
DU PONT POWDER CO.

PIONEER POWDER MAKERS OF AMERICA

Established 1802

WILMINGTON, DEL.

After the Blast



Addresses of experienced agricultural blasters furnished on request, if desired.
DuPont Powder Co.

GET IN BUSINESS FOR YOURSELF
THIS IS YOUR CHANCE. Will You See It—and Grab It?
Note our new improved SAW RAISING LEVER—it makes more speed, 100% bigger capacity, more money per day.

THE KING OF THE WOODS

will cut a 5 ft log in 5 minutes.
and small logs as fast as a hand saw.

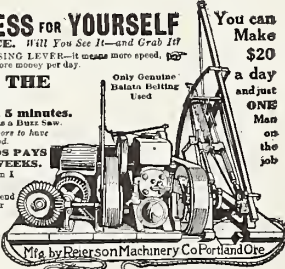
It will pay your neighbors to have you cut their wood.

THE KING OF THE WOODS PAYS FOR ITSELF IN THREE WEEKS.

It answers the question—How can I make more money on the farm?

You want to know more about it—Send us your name on a postal for our Catalog. It doesn't cost you a cent and may win big money for you.

Send for the Catalog D. & Nov.
REIERSON MACHINERY CO.
PORTLAND, OREGON



You can Make \$20 a day and just ONE Man on the job

Only Genuine Reiersson Saw Raising Lever

Mfg. by Reiersson Machinery Co. Portland Ore

Clark's Plan in Yakima

From Wenatchee (Washington) Republic

THE Yakima Valley Fruit Growers' Association has adopted the plan that was proposed in Wenatchee by W. T. Clark. It has changed its by-laws providing for a number of district associations, which will market their fruit through the parent association, and establishing an operating fund by collecting on all fruit handled a sum in addition to the actual marketing charge. Members are required to sign three-year contracts, and at the expiration of the contracts they receive from the association the amounts, with moderate interest, advanced by them to the organization.

The by-laws providing for the operating fund reads as follows: "From all sale of fruit or other products made by this association as agent for the members of the district associations, or others, in addition to the regular sales commissions which may from time to time be fixed and charged, there shall also be charged and deducted from the proceeds of such sales when settlement is made with the owner an additional amount or percentage as follows: Apples, 5 cents per box; pears, 4 cents per box; berries (selling above \$1 per crate) and prunes, 2½ cents per crate; peaches, 1½ cents per box; grapes, 1½ cents per crate; grapes (8-pound baskets), 1½ cents per basket. Any and all varieties of fruits or products shipped in either barrels, boxes, crates or baskets and not provided for in the above schedule shall, for the purposes of establishment of the surplus fund, be classed with and take the same rate as that above specified, whose current market value it most nearly equals. On watermelons, potatoes and all vegetables, berries, fruit or other products shipped in sacks or bulk and not otherwise provided for, there shall be deducted four per cent of the net amount realized by the association from the sale thereof. Such deductions shall be deemed a loan from the members to this association contributed in lieu of the collateral notes heretofore required to be given to provide funds with which to properly finance the association and carry on its business. At any time when final settlement is made with a grower for products marketed for him by this association there shall be issued to him the promissory note of this association equal in face value to the total of all amounts deducted from his sales on account of the surplus fund; said promissory note to be dated on the first day of either January, April, July or October first succeeding the date of such settlement, to run for three years from date, to bear interest at the rate of four per cent per annum and be signed by the manager and secretary of this association. The surplus fund herein provided for to be used as may be necessary in properly financing this association and carrying on the business for which it is organized and for returning to the members of the district associations the moneys contributed thereto

New Invention for Sharpening Sickles



Sharpens against side face of wheel. Holder gives perfect control and an absolutely perfect and uniform bevel to every tooth. Get your sickle and mower knives sharpened up and ready for work with the

Luther Farm Tool Grinder

It is a wonderful grinder—the only all steel frame grinder made—has shaft drive like an automobile—enclosed bearings—gravity lubrication. Has 30 different attachments for doing all kinds of difficult tool sharpening, also rip saw, jig saw, drill, lathe, forge attachment, etc.

Over Half a Million Farmers now sharpen their Farm Tools and Implements

Fast Sharpening Wheels Save Time
Luther Tool Grinders are equipped with the rapid Dymo-Grit sharpening wheels—"The wheel for steel"—25 times faster than the grindstone, 10 times more efficient than emery. Will positively not draw temper.

FREE TRIAL ON YOUR FARM

Send for special 30 days Free Trial Offer and 40-page free book which tells all about this wonderful free machine. Address

LUTHER GRINDER MFG. CO.
1168 Stroth Building Milwaukee, Wis.

BETTER FRUIT

Has no peer in the Northwest

And so we have established

The Fruit Journal

along similar lines in behalf of the great irrigated fruit districts of the Rocky Mountain region, a companion paper to this, your favorite fruit magazine.

We have made it up-to-date, clean, high class editorially, mechanically and pictorially.

The subscription rate is \$1.00 per year. It is worth it.

THE INTERMOUNTAIN FRUIT JOURNAL

Grand Junction, Colorado



**LILLY'S
BEST
BEE
SUPPLIES**

Are standard—the best to be had for money-making purposes. We are Agents for Lewis Bee Ware. Send for Catalog. Most authoritative Bee Book issued, 34 pages of definite information. Illustrated.

The Chas. H. Lilly Co. Seattle.

Things We Are Agents For

Knox Hats

Alfred Benjamin & Co.'s Clothing

Dr. Jaeger Underwear

Dr. Deimel Linen Mesh Underwear

Dent's and Fownes' Gloves

Buffum & Pendleton

311 Morrison Street
Portland, Oregon

Make Big Money Drilling Wells



IMPROVED STANDARD DRILLING MACHINE
One Man Can Handle
Has a record of drilling 130 feet and driving casing in one day. Only three levers. Extra large rope sheaves. Positively will drill every kind of formation. Avoid delays from sending back East. Buy from us. We build these up-to-date machines. Will tell you all in catalog. Write for it.

GEIERSON MACHINERY CO., MANFRS., PORTLAND, OREGON

STORAGE

Ship your Furniture to us to be stored until you are located

Transfer & Livery Co.
Hood River, Oregon

Irrigate Your Orchard

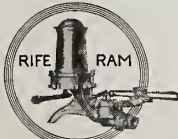
or fruit patch without expense or bother of pumping. Use an automatic

RIFE RAM

Costs little to install—nothing to operate. Raises water 30 feet for every foot of fall. Land lying above canal or stream supplied with water. Pumps automatically day and night, winter and summer. Fully guaranteed.

If there is a stream, pond or spring within a mile write for plans, book and trial offer, free.

RIFE ENGINE CO.
2525 Trinity Building
New York



as the notes given therefor shall mature. Any moneys derived from other sources in excess of operating expenses, interest and fixed charges of the association shall be, at the end of each year, applied by the trustees to pay back to the district association the portion of the membership fees heretofore paid by the district association to this association, until all such fees (\$100 each) heretofore turned over to this association have been returned; thereafter such excess moneys shall be distributed back to the members of the district associations pro rata in proportion to the value of the products marketed for each member or supplies furnished him. All commissions and other moneys received from members of the district associations for products handled and marketed, or services rendered by this association, shall belong to this association, and if said moneys come into the possession of a district association such association shall immediately remit the same to the treasurer of this association. Each district association may, if it desires, levy assessments or dues, or make charges over and above the charges of this association, on a vote of two-thirds of the members of such district association; any moneys coming to the treasurer of the district association from such source shall belong solely to such association, to be used by it for such purposes as its trustees may determine."

The directors of the association declare that the fund will increase with heavy tonnage and diminish with light crops, thus nicely adjusting itself to all changing conditions. There will always be three years' contributions remaining in the fund, which period of time will safely bridge over occasional non-productive years. In case of final liquidation the three years' period admits of an orderly settlement and liquidation of affairs and safeguards any demand for precipitate or hasty action. Based upon present crop prospects, it is estimated that this fund will aggregate at the close of the present season from \$30,000 to \$50,000, and that by the close of its first three-year period it will aggregate from \$100,000 to \$150,000.

Fancy prices are paid for fruit which is accurately graded and honestly packed. Do not throw away your rightful profits by neglecting to put it up in an attractive package. Schellenger Fruit Grading Machine Company.*

An advertisement elsewhere in this issue indicates that the irrigation project in Okanogan County, Washington, promoted by Colonel A. M. Dewey of Spokane, has come to grief. This has been considered one of the best projects of its kind in the Northwest, and Colonel Dewey is said to have expended some sixty thousand dollars in ditch digging before the financial stringency of one year ago forced him into the hands of a receiver. The land covered by surveys for ditches is second to none, and it would seem to be an opportunity for some syndicate to realize handsomely on an investment by buying and maturing the enterprise. The engineer's estimate of amount required to do this work and put water on 16,000 acres of land is less than twenty dollars per acre. The distribution system is all gravity.—Thomas H. Jones, Receiver Okanogan Irrigation Company.*

J-M ASBESTOS ROOFING

FIREPROOF, NEVER NEEDS PAINTING

WRITE FOR BOOK NO 59

H. W. JOHNS-MANVILLE CO.

NEW YORK AND ALL LARGE CITIES.

C.F.SUMNER

**HOOD RIVER
OREGON**

**First-Class House Plumbing
and
House Heating**

GENERAL LINE OF

Plumbers' Supplies

J. M. SCHMELTZER, Secretary

HOOD RIVER ABSTRACT COMPANY

HOOD RIVER, OREGON

**ABSTRACTS INSURANCE
CONVEYANCING**

BUY AND TRY

**White
River
Flour**

MAKES

**Whiter, Lighter
Bread**

Get the Best Write us to-day for our remarkable offer on **Free Catalog**

**Monarch Hydraulic
Cider Press**

—all sizes—guaranteed strength and capacity. Also Gasoline and Steam ENGINES, Threshers, Saw Mills.



MONARCH MCHY. CO., 640 Hudson Terminal, New York

Northwest Fruit Growers' Unions and Associations

We publish free in this column the name of any fruitgrowers' organization. Secretaries are requested to furnish particulars for publication.

Oregon

Eugene Fruit Growers' Association, Eugene; Ashland Fruit and Produce Association, Ashland; Hood River Apple Growers' Union, Hood River; Milton Fruit Growers' Union, Milton; Douglas County Fruit Growers' Association, Roseburg; Willamette Valley Prune Association, Salem; Mosier Fruit Growers' Association, Mosier; The Dalles Fruit Growers' Union, The Dalles; Salem Fruit Union, Salem; Albany Fruit Growers' Union, Albany; Coos Bay Fruit Growers' Association, Marshfield; Estacada Fruit Growers' Association, Estacada; Umpqua Valley Fruit Growers' Association, Roseburg; Hyland Fruit Growers of Yamhill County, Sheridan; Newburg Apple Growers' Association, Newburg; Dufur Valley Fruit Growers' Union, Dufur; McMinnville Fruit Growers' Association, McMinnville; Coquille Valley Fruit Growers' Union, Myrtle Point; Stanfield Fruit Growers' Association, Stanfield; Oregon City Fruit and Produce Association, Oregon City; Lincoln County Fruit Growers' Union, Toledo; Rogue River Fruit and Produce Association, Medford; Mount Hood Fruit Growers' Association, Sandy; Northeast Gaston Farmers' Association, Forest Grove; Dallas Fruit Growers' Association, Dallas; Northwest Fruit Exchange, Portland; Springbrook Fruit Growers' Union, Springbrook; Cove Fruit Growers' Association, Cove; Santiam Fruit Growers' Association, Lebanon; Washington County Fruit Growers' Association, Hillsboro; Benton County Fruit Growers' Association, Corvallis; Sutherlin Fruit Growers' Association, Sutherlin; Brownsville Fruit and Produce Association, Brownsville; La Grande Fruit Association, La Grande; Imbler Fruit Growers' Union, Imbler.

Washington

Kennewick Fruit Growers' Association, Kennewick; Wenatchee Valley Fruit Growers' Association, Wenatchee; Puyallup and Sumner Fruit Growers' Association, Puyallup; Vashon Island Fruit Growers' Association, Vashon; Mt. Vernon Fruit Growers' Association, Mt. Vernon; White Salmon Fruit Growers' Union, White Salmon; Thurston County Fruit Growers' Union, Tumwater; Bay Island Fruit Growers' Association, Tacoma; Yakima Valley Fruit and Produce Growers' Association, Granger; Buckley Fruit Growers' Association, Buckley; Lewis River Fruit Growers' Union, Woodland; Yakima County Horticultural Union, North Yakima; White River Valley Fruit and Berry Growers' Association, Kent; Lake Chelan Fruit Growers' Association, Chelan; Zillah Fruit Growers' Association, Toppenish; Kiona Fruit Growers' Union, Kiona; Mason County Fruit Growers' Association, Shelton; Clarkston Fruit Growers' Association, Clarkston; Walla Walla Fruit and Vegetable Union, Walla Walla; The Ridgefield Fruit Growers' Association, Ridgefield; Felida Prune Growers' Association, Vancouver; Grandview Fruit Growers' Association, Grandview; Yakima Valley Fruit Growers' Association, North Yakima; Southwest Washington Fruit Growers' Association, Chehalis; The Touchet Valley Fruit and Produce Union, Dayton; Lewis County Fruit Growers' Association, Centralia; The Green Bluffs Fruit Growers' Association, Mead; Garfield Fruit Growers' Union, Garfield; Goldendale Fruit and Produce Association, Goldendale; Spokane Inland Fruit Growers' Association, Kelso; Elma Fruit and Produce Association, Elma; Granger Fruit Growers' Association, Granger; Cashmere Fruit Growers' Union, Cashmere; Stevens County Fruit Growers' Union, Myers Falls; Dryden Fruit Growers' Union, Dryden; Apple Growers' Union of White Salmon, Underwood; Spokane Valley Growers' Union, Spokane; Spokane County Horticultural Society, Spokane; Spokane Highlands Fruit Growers' Association, Chester; Spokane District Fruit Growers' Association, Spokane; Cowlitz Fruit and Produce Association, Kelso; Kalama Fruit Growers' Association, Kalama; Pullman Fruit Growers' Association, Pullman.

Idaho

Southern Idaho Fruit Shippers' Association, Boise; New Plymouth Fruit Growers' Association, New Plymouth; Payette Valley Apple Growers' Union, Payette; Parma-Roswell Fruit Growers' Association, Parma; Weiser Fruit and Produce Growers' Association, Weiser; Council Valley Fruit Growers' Association, Council; Nampa Fruit Growers' Association, Nampa; Lewiston Orchards Assembly, Lewiston; Boise Valley Fruit Growers' Association, Boise; Caldwell Fruit Growers' Association, Caldwell; Emmett Fruit Growers' Association, Emmett; Twin Falls Fruit Growers' Association, Twin Falls; Weiser River Fruit Growers' Association, Weiser; Fruit Growers' Association, Moscow.

Colorado

San Juan Fruit and Produce Growers' Association, Durango; Fremont County Fruit Growers' Association, Canon City; Rocky Ford Melon Growers' Association, Rocky Ford; Plateau and Debeque Fruit, Honey and Produce Association, Debeque; The Producers' Association, Debeque; Surface Creek Fruit Growers' Association, Austin; Longmont Produce Exchange, Longmont; Manzanola Fruit Association, Manzanola; Delta County Fruit Growers' Association, Delta; Boulder County Fruit Growers' Association, Boulder; Fort Collins Beet Growers' Association, Fort Collins; La Junta Melon and Produce Company, La Junta; Rifle Fruit and Produce Association, Rifle; North Fork Fruit Growers' Association, Paonia; Fruita Fruit and Produce Association, Fruita; Grand Junction Fruit Growers' Association, Clifton; Palisade, Grand Junction; Palisade Fruit Growers' Association, Palisade; Colorado Fruit and Commercial Company, Grand Junction; Montrose Fruit and Produce Association, Montrose; Hotchkiss Fruit Growers' Association, Hotchkiss; Paonia Fruit Exchange, Paonia; Colorado Fruit Growers' Association, Delta; Crawford Fruit Growers' Association, Crawford; Amity Cantaloupe Growers' Association, Amity; Pent County Melon Growers' Association, Las Animas; Capitol Hill Melon Growers' Association, Rocky Ford; Denver Fruit and Vegetable Association, Denver; Fair Mount Melon Growers' Association, Swink; Fowler Melon Growers' Association, Fowler; Granada Melon Growers' Association, Granada; Grand Valley Fruit and Produce Association, Grand Junction; Independent Fruit Growers' Association, Grand Junction; Kouns Party Cantaloupe Growers' Association, Rocky Ford; Lamar Melon Growers' Association, Lamar; Loveland Fruit Growers' Association, Loveland; Manzanola Orchard Association, Manzanola; Newdale Melon Growers' Association, Swink; Roaring Fork Potato Growers' Association, Carbonade; Woods Melon Growers' Association, Las Animas; Western Slope Fruit Growers' Association, Palisade.

Montana

Bitter Root Fruit Growers' Association, Hamilton; Missoula Fruit and Produce Association, Missoula; Woodside Fruit Growers' Association, Woodside.

Utah

Farmers and Fruit Growers' Forwarding Association, Centerville; Ogden Fruit Growers' Association, Ogden; Brigham City Fruit Growers' Association, Brigham City; Utah County Fruit & Produce Association, Provo; Willard Fruit Growers' Association, Willard; Excelsior Fruit & Produce Association, Clearfield (Post-office Layton R. F. D.); Centerville Fruit Growers' Association, Centerville; Bear River Valley Fruit Growers' Association, Bear River City; Springville Fruit Growers' Association, Springville; Cache Valley Fruit Growers' Association, Wellsville; Green River Fruit Growers' Association, Green River; Farmers and Fruit Growers' Forwarding Association, Centerville.

New Mexico

San Juan Fruit and Produce Association, Farmington.

California

The Supply Company of the California Fruit Growers' Association, Los Angeles; California Fruit Exchange, Sacramento; Loomis Fruit Growers' Association, Loomis; Newcastle Fruit Growers' Association, Newcastle; Penryn Fruit Growers' Association, Penryn; Vacaville Fruit Growers' Association, Vacaville; Turlock Fruit Growers' Association, Turlock; Winters Fruit Growers' Association, Winters; Lincoln Fruit Growers' Association, Lincoln; Lodi Fruit Growers' Union, Lodi; Fresno Fruit Growers' Co., Fresno; Stanislaus Farmers' Union, Modesto; California Farmers' Union, Fresno; Sebastopol Berry Growers' Union, Sebastopol; Sebastopol Apple Growers' Union, Sebastopol.

British Columbia

British Columbia Fruit Growers' Association, Victoria; Victoria Fruit Growers' Exchange, Victoria; Hammond Fruit Association, Ltd., Hammond; Hatzic Fruit Growers' Association, Hatzic; Western Fruit Growers' Association, Mission; Mission Fruit Growers' Association, Mission; Salmon Arm Farmers' Exchange, Salmon Arm; Armstrong Fruit Growers' Association, Armstrong; Okanagan Fruit Union, Limited, Vernon; Kelowna Farmers' Exchange, Limited, Kelowna; Summerland Fruit Growers' Association, Summerland; Kootenay Fruit Growers' Union, Limited, Nelson; Grand Forks Fruit Growers' Association, Grand Forks; Boswell-Kootenay Lake Union, Boswell; Queens Bay Fruit Growers' Association, Queens Bay; Kaslo Horticultural Association, Kaslo; Creston Fruit and Produce Exchange, Creston.

A HOME, ORCHARD OR FARM

Secure it in an Ideal Climate and Scenic Locality

ASHLAND OREGON

IN THE FAMOUS ROGUE RIVER VALLEY

A RESIDENCE AND RESORT TOWN

A FINE EDUCATIONAL CENTER

A RAILWAY DIVISION TERMINAL

More settlers wanted to develop our tracts of land, both large and small. Manufactories welcomed and liberal inducements offered for their establishment. ASHLAND has all modern improvements, and is located amid an environment exceedingly beautiful and picturesque.

For information concerning Fruit, Poultry and Swine Raising, Dairying, Ranching, Mining, etc., address

ASHLAND COMMERCIAL CLUB
Ashland, Oregon

The Paris Fair

Hood River's largest and best store

RETAILERS OF

EVERYTHING TO WEAR

AGENTS FOR

HAMILTON & BROWN AND
THE BROWN SHOES

HART, SCHAFFNER & MARX
CLOTHES

MANHATTAN SHIRTS

JOHN B. STETSON HATS

NEMO CORSETS

Strictly Cash—One Price to All

Stranahan & Clark

DEALERS IN

Commercial Fertilizers

Land Plaster

Lime

Plaster Paris

Cement

Building Plasters

HOOD RIVER, OREGON

SLOCOM'S BOOK STORE

Office Supplies

Stationery

Ledgers, Journals, Time Books

Memorandum Books

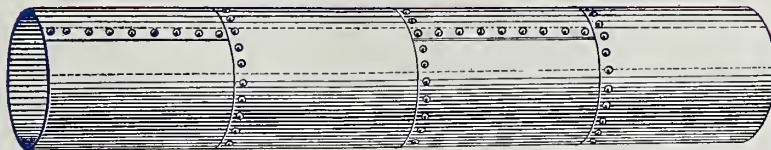
Rubber Stamps

Souvenir Postals Picture Frames

COLUMBIA ENGINEERING WORKS

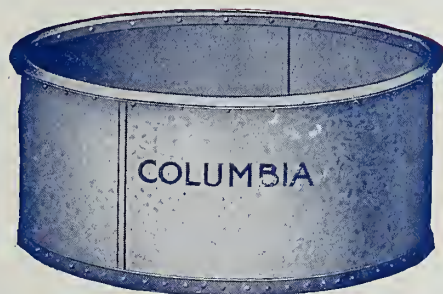
PORTLAND, OREGON

Steel Pipes
Save Water

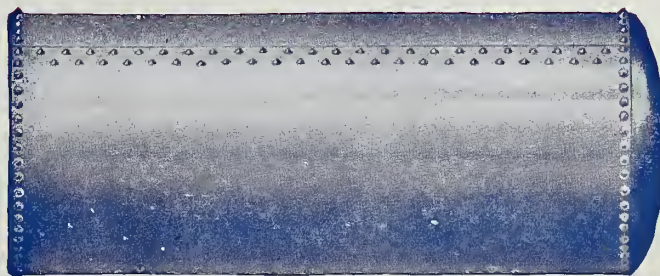


Steel Pipes
Save Labor

**You Do Not Have to Wait for Steel Pipes to "Soak Up"
and They Last Indefinitely**



Write
for
Catalog
No. 33



No Plumbing, Running Water or Modern Sewerage Required with the WHITE STAR CHEMICAL CLOSET

The White Star Chemical Closet is a sanitary, convenient, *absolutely odorless* toilet, bringing a modern comfort and convenience to every country and suburban home where running water or modern sewerage is not available.

**Satisfaction
Guaranteed
or your
money back**

The old fashioned privy is not only unpleasant; it is also a breeder of disease. Then, too, it is always inconvenient, especially in times of sickness. It is generally far removed from the house, out where it is exposed to the broiling heat in summer and icy in cold winter.

B.F. Sanitary Closet Co.
302 Pine Street
PORTLAND, ORE.
Please send me FREE
Illustrated Catalog and Price
List of the White Star Chemical Closets

It will pay you to investigate the White Star Chemical Closet. It is so simple, nothing to get out of order. Anyone can install it. The cost of installing and the maintenance is so low that every family can afford one. Best of all, it gives absolute comfort and convenience. You can install it in a bed-room, bathroom, closet — *Anywhere* and be sure of perfect satisfaction. Doctors and health officers everywhere recommend it. Thousands of users are more than pleased. **READ WHAT THEY SAY**

**SEND FOR OUR
ILLUSTRATED CATALOG NOW. FREE**

Gives full information and facts,
Tells what users say. Simply sign
and mail the coupon.

Sanitary Closet Co.

302 Pine Street

PORTLAND, OREGON

Installs a White Star in Summer Home:

"After Careful investigation, I find your White Star Chemical Closet all you claim for it—perfectly odorless and sanitary and extremely simple. It fills a long felt want and has only to be seen to be appreciated. I walled off a little closet on the back porch for ours and we would not be without it. *Yours truly*, A. H. DEUTE, R. F. D. No. 1, Sherwood, Oregon.

**Absolutely
Odorless and
Sanitary
Over 25000
In Use**



STYLE 3, PRICE \$20 FREIGHT PREPAID

THE WORLD—OUR ORCHARD

STEINHARDT & KELLY

101 PARK PLACE

NEW YORK

**MOST IMPORTANT FACTORS AND
LARGEST OPERATORS IN HIGH
CLASS FRUITS IN THE WORLD.**

**PURVEYORS TO THE MOST PAR-
TICULAR CONSUMING CLIENTELE
ON BOTH HEMISPHERES.**

**DIRECT CONNECTIONS IN ALL
LEADING MARKETS AND PRO-
DUCING SECTIONS.**

THE WORLD—OUR ORCHARD